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On the Progreſs of the Variolæ Vaccinæ: By Dr. PEARSON.

DR. PEARSON's communication of a paper, entitled " *A Statement of the Progreſs in the Practice of the* Vaccine Inoculation, *and* TRIALS *to determine ſome important Facts relating to the Vaccine Diſeaſe,*" came much too late for inſertion in the preſent Number.

We ſhall now anticipate the accounts ſo far as to acquaint our readers that the paper reſpects—

1. The proportion of deaths by the vaccine diſeaſe to be one in about 2000 already inoculated, and in the ſmall-pox the proportion is eſtimated at ten times this number of deaths, or one out of 200.

2. That no eruptions like the ſmall-pox have been ſeen by the author, or are ſtated in the accounts ſent to him during the laſt four months.

3. That although in many caſes the cow-pox by inoculation is a more ſevere diſeaſe, and attended with more alarming ſymptoms than was originally repreſented, yet, in general, it is a far ſlighter diſeaſe than the inoculated ſmall-pox.

4. That neither in his own practice, nor in that of his correſpondents, have any bad conſequences enſued from the inflamed arms, although in ſome caſes the eryſipelatous, or as Dr. Pearſon calls it, *erythematous* affections was very formidable. In particular he ſtates, that the conſtitution was very little diſordered when almoſt the whole arm was covered with erythema; and that this affection, without any applications, or merely ſedative ones, ſpeedily diſappeared.

Dr. Pearſon has the ſatisfaction of announcing, that the vaccine inoculation has occaſioned a conſiderable ſenſation in Germany, and that ſome of the principal phyſicians at Vienna, viz. Dr. DE CARRO and Dr. FERRO, have already inoculated their own children with matter tranſmitted by himſelf:—that Dr. FRANK propoſes to ſubſtitute the cow-pox for the ſmall-pox in his inoculation-practice.

Dr. Pearſon expects ſoon to receive accounts from Portugal. In Scotland, nearly one hundred perſons have been inoculated by Dr. ANDERSON; and Dr. Pearſon finds that the practice is extending rapidly in that country.

But the moſt curious part of this paper, is that concerning his *trials* to obtain ſome uſeful determinations reſulting from experience.

1. It is known that the ſmall-pox renders the conſtitution unſuſceptible of this diſeaſe a ſecond time.

2. It ſeems now proved, that the cow-pox renders the conſtitution unſuſceptible of the ſmall-pox.

3. Dr. Pearſon ſhews by experiments, that perſons who have had the *ſmall-pox* cannot take the cow-pox, contrary to Drs. JENNER and WOODVILLE.

4. It might hence be concluded, that a perſon who has undergone the cow-pox is unſuſceptible of the cow-pox a ſecond time: but although the preceding propoſitions ſeem to demonſtrate this laſt fact, Dr. Pearſon does not truſt to reaſoning, but determines it by obſervations.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

AS Dr. LUBBOCK's remarks on my letter require an anſwer, I ſhall be obliged to you to inſert in your next number the following obſervations:

By aſſerting that MAYOW's name was not mentioned in any author whom I had conſulted, publiſhed during his life, I could not poſſibly imply that others whom I had not ſeen did not take notice of him. From the ſilence, however, of many cotemporary authors of the firſt reſpectability, I felt a confidence in concluding, that the doctrines of Mayow, did not meet with that immediate reception to which they were juſtly entitled by the accurate experiments from which they were drawn; and I muſt ſtill withhold my aſſent to any great diffuſion of his opinions during his life. I aſſert not this from prejudice, or from a blindneſs to conviction; for by promoting the inveſtigation, I ſhall feel equal pleaſure, whether the ſpark of truth be ſtruck out by the genius of Dr. Lubbock, or by my own humble exertions. The various reading of Dr. Lubbock has led him to but one author who has mentioned Mayow during his life, and notwithſtanding this author filled a Profeſſor's chair, and not without celebrity, yet either from the want of a genius among his pupils, or, more probably, from the want of a conviction of

of the truth of Mayow's doctrines, they did not acquire that publicity, which a minute detail, before a numerous audience, would readily have produced; for, had ETMULLER fully comprehended the extent and importance of Mayow's discoveries, he would not have failed to have related them to his pupils with all the impressive force of a professor, and their young minds would certainly have yielded to the impression in such a manner, as to give to the doctrines an immediate and extensive circulation. Such an interesting curiosity would have been excited, that no physiologist would have appeared before the public, without passing some observations on a topic which engaged so general an attention; but it was far otherwise, for the doctrines of STAHL prevailed by the celebrity of their author, over the infancy of Mayow's discoveries: but severe, no doubt, would have been the struggle, had Mayow's life been spared. With respect to MUNDAY, I am supported in my opinion by Dr. SCHERER, of Weimar, in Germany. This ingenious chemist has just published an edition of Mayow's works, translated into the German language, with a copy of which he has favoured me; it is to be followed by a commentary.

From the merits of LOWER, I by no means wish to detract. He was one of the first who pointed out the difference between arterial and venous blood, and the cause of that difference; for in the preface to the fourth edition of his treatise on the heart, he observes, "Nemo hactenus venosi atque arteriosi (sanguinis) quoad colorem discrimen clare illustrandum susceperit." No experiments so clearly proved and illustrated this subject as those of the indefatigable Mayow; and, notwithstanding the fourth edition of the Tractatus de corde, was published (1680) twelve years after Mayow's Treatise on Respiration and the Rickets (1668), and of which an account was given in Phil. Trans. of that year, and six years after the complete edition of his works (1674), yet not a single observation is to be found concerning Mayow or his doctrines. Mayow does not betray such illiberality towards Lower, whose experiments on the difference of colour in the blood he quotes in chap. viii. p. 148 of his works:—a proof that Lower must have written previous, at least, to the publication of this part of Mayow's works.

I must also still be of the opinion that THRUSTON ought to have quoted Mayow.—Because a friend writes a letter of congratulation to an author on the publication of a particular doctrine, it is no proof of the difference of such a doctrine, and upon no account could Mayow quote opinions that were merely whispered in conversation, particularly as it was impossible for him to vouch for their authenticity. Others, too, might have disputed with Thruston the priority of right to the promulgation of such doctrines, which indeed is

rendered

rendered probable from what Thruston himself says, and of which Dr. Lubbock has taken notice.—In page 106 of Observations on Modern Discoveries, I have said, when speaking of Thruston's opinions, "How similar, with some exception, is this to the reasoning of Mayow. Were the experiments of Mayow, before publication, noised abroad, so as to suggest these ideas to Thruston, or did opinions, like these, beginning to prevail at that time, from observation, rouse the genius of Mayow to institute experiments to confirm the truth of them?" It is certainly very remarkable, that experiments so well conducted as those of Mayow, and instituted with a view of illustrating a point so much the subject of investigation at that time, should not have received the honour of quotation from such men as Thruston and Lower.

The crude state in which Mayow found chemical science, obliged him to invent terms, the ambiguity of which perplexed many, but still, however, he made a very great distinction between nitre and nitro-aëreal particles, and was solicitous on all occasions, that his readers should make the same discrimination. He sets out with giving, in some degree, a nomenclature, and because he found in nitre active particles, similar to the active part of atmospheric air, he terms them as being common to both, "particulæ anitro-aëreæ. Quocirca particulas istas igneas nitro aërique communes, particulas nitro-aëreas, sive spiritum nitro-aëreum in futurum nuncupare liceat," p. 18. He seems anxious to avoid the expression nitrum aëris, least he should convey the idea that nitre, as such, was contained in the atmosphere. Surely I have good reasons for concluding that such was the opinion of some of the authors quoted by Dr. Lubbock, when in one short passage taken by him from CONNOR, the words nitrum aëris are repeatedly mentioned.

In p. 242 of Observations on Modern Discoveries, the following remarks on Mayow's terms will be found:—"The equivocal expressions, particulæ nitro-aëreæ, nitro-salinæ, &c. which Mayow used, is a reason why he was so easily misunderstood by those who did not thoroughly examine into his expressions, and also afforded an opportunity for others to ascribe to him opinions which he never publicly avowed. Science was not sufficiently improved to allow of better, and as far as chemistry was advanced at this period, no terms could be more aptly applied. Had Mayow lived to an older age, his terms would no doubt have been altered; as by a variety of experiments, he would have extended his discovery of oxygen more generally, and have seen the necessity of inventing expressions less equivocal."

Having thus finished my answer to Dr. Lubbock, whose candour in the controversy claims my acknowledgments, permit me, gentlemen, to make a few more observations respecting Mayow.

Any

Any one who has ever read the Tractatus quinque of Mayow, must have discovered a depth of penetration and an accuracy of observation rarely to be met with in so young a man. In him were combined many requisites for a great literary character, a perseverance in research, with a judgment for its direction. It is a little extraordinary, that FOURCROY should charge Mayow with not having pushed his discoveries farther, and that he did but little more than enter upon a career, of the extent of which he had no conception, and that he was not sufficiently struck with the importance of his discoveries. The French chemist has, in other instances, done ample justice to our countryman, but in the above assertion he does not seem to have applied his usual accuracy. Let it be remembered, that the career, upon which Mayow entered terminated only with his life, and no obstacles, however great, checked the ardour of his pursuits. The illiberal and unphilosophical silence observed towards him, in subjects too, upon which his labours had thrown the greatest light, roused not his resentment, and the imputation of novelty in his doctrines, perhaps of youth in himself, restrained not that noble spirit of inquiry with which he was endowed. I am not, I think, too sanguine in imagining, that had Mayow lived to an advanced age, his ardent mind would not have suffered doctrines to have been lost in oblivion for the want of reiterated and varied experiments to confirm the truth of them; and he would have anticipated in a great measure that noble system of chemistry which has so admirably refuted the doctrine of phlogiston; and so fully convinced was he of the truth of those opinions which he adopted, that in the dedication of his works to Mr. COVENTRY, he makes the following dignified and manly exordium. "Tractatus hosce nomini tuo, vir clarissime, non eo animo inscripsimus, ut eorum patrocinium & defensionem susciperes: veritas enim ipsa se defendet; et si quid erroris, pro humani generis infelicitate admissum sit, patronum ei quærere non debeo, cui hostem me esse cum primis profiteor." Mayow certainly did not confine the inferences from his experiments within a narrow compass, as the chapters, De motu musculari, De spiritibus animalibus, and other parts of his works, fully evince. He endeavoured to explain the laws of the animal economy from his chemical discoveries, and he certainly has a fair claim in many instances to successful conjecture, and in most, to more than plausible theory. He was indeed the LAVOISIER of the seventeenth century. I beg to be understood as speaking relatively to the state of the sciences at the different periods in which these great men lived.

Before his death Mayow repaired to London (at what period I cannot exactly say), probably with a view of exerting those abilities in the metropolis, which had been so successfully employed in provincial practice. He

was, no doubt, ambitious of being conſpicuous in the Royal Society, and alſo by farther elucidation, of confirming his chemical diſcoveries.—He died at the houſe of an apothecary in York-ſtreet, near Covent Garden, his conſtitution having probably been injured by conſtant and ſevere ſtudy, which an unfortunate marriage was ill-calculated to repair.

I am, Gentlemen,

Yours, &c.

Bedford, *Aug.* 8, 1799. G. D. YEATS.

To the Editors of the Medical and Phyſical Journal.

Gentlemen,

ONE great advantage of your valuable publication is, that it admits of the communication of practical facts, the knowledge of which may be uſeful to medical men, without the neceſſity of entering into long details, for which few practitioners have time or inclination.

The uſe of digitalis purpurea, in pulmonary diſeaſes, has, for ſome years paſt, been no novelty in this town; and the gentlemen who have employed it, have commonly joined it with opium—a combination by which the inconveniences of the two medicines, often experienced when they are given ſeparately, are happily corrected. Perhaps the Materia Medica contains no remedy which affords more relief to, and which even cures, harraſſing coughs, attended with inflammatory ſymptoms, that often induce phthiſis, than the digitalis; though I cannot ſay I have ever known phthiſis, when really formed, to be removed by it.—From its remarkable effects in diminiſhing the force of the arterial ſyſtem, Dr. Ferriar was led to adminiſter it, with great ſucceſs, in caſes of active hæmorrhage, and, by parity of reaſoning, I laſt winter employed it with advantage, in a caſe of acute rheumatiſm.

A gentleman's ſervant, of thin habit, and narrow cheſt, by careleſſly expoſing himſelf to the cold of laſt winter, was repeatedly attacked by a bad cough, which yielded to the common remedies.—On the firſt of December, by inattention to thoſe precautions of warm cloathing, &c. which had been recommended to him, his cough returned, attended with acute pain in his breaſt, affecting his reſpiration, ſo as to threaten peripneumony;—blood, which proved ſizy, was taken from his arm; antimonials, demulcents with nitre, and aperients were exhibited; the pain now quitted his breaſt, and attacked his ſhoulder, from whence, during the enſuing

ensuing days, it removed alternately into the higher and lower limbs, attended with such swelling of the hands and feet, as clearly pointed out the case to be rheumatic. In addition to the above-mentioned medicines, he, on the evening of the fourth, took pulv. Ipecac. c. scrup. j. which was repeated every night till the eighth, when, the pain increasing in violence, the antimonials were omitted, and ten grains of the same powder were given every six hours. The remedies that had been used, caused profuse perspiration, but without producing the least abatement of his pain, and his pulse beat 140 strokes in the minute. My experience had taught me not to expect much relief from repeated bleeding in this disease, yet it seemed necessary to reduce the action of the vessels. From the well-known efficacy of digitalis in diminishing the frequency of the pulse, it occurred to me, to make trial of it, on this occasion; and the cough being very troublesome, and pain acute, I determined to join opium with it; accordingly, at three o'clock in the afternoon, December 9th, he took a pill composed of opii gr. j, pulv. fol. digital. purpur. gr. ss. On visiting him in the evening, his pulse was found considerably less frequent, and he thought his pain and cough not quite so severe. He was directed to repeat the pill every eight hours. The next morning all his symptoms were ameliorated, and his pulse reduced to about 90. The same plan was therefore continued, with evident advantage, attention being paid to avoid constipation, till the fourteenth, when the rheumatism being removed, and his pulse reduced nearly to the natural standard, the digitalis was omitted, and he was ordered a decoction of bark with antimonial wine; but his cough being at times troublesome, he took a pill of opium and camphor twice a day, for two or three days longer. On the 18th, the cough being still teazing, a blister was applied between the shoulders; and, by it, and a continuance of the bark, for a few more days, he was completely cured.

It is with pleasure I am able to bear testimony to the good effects of opiate friction, as recommended by my worthy friend, Mr. Ward, in the fifth Number of your Journal.

A young lady of about thirteen years of age, much harrassed with ascarides, had been removed, on the death of a brother by typhus, from this town to Warrington. In a few days, symptoms of typhus attacked her; but, instead of proper measures being taken, she was encouraged to walk out; and growing worse, her friend, with whom she had been placed, brought her, on the tenth day of the fever, twenty miles in a stage-coach, to her parents. On the evening of this day, July 28th, I visited her, and found her in a state of great irritability, with a rapid pulse, considerable heat, and fallen countenance; her bowels being constipated, she was, with

great

great difficulty, prevailed on to take a powder consisting of calomel and James's powder, of each one grain, rhubarb and opiate powder, of each four grains: this procured three loose stools, in which a great number of ascarides were discharged; she now, with a degree of obstinacy I have seldom witnessed, protested against taking any medicine, or even any appropriate food. On the thirtieth, a diarrhœa prevailing to an alarming degree, ten drops of laudanum, concealed in a cup of coffee, were given without her knowledge; and this single dose was the only medicine which, during three days, we were able to administer. She was sinking fast, her pulse very rapid and feeble, and she had a tendency to delirium. Wine, which in this state, seemed highly requisite, she positively rejected; and I despaired of being able to succeed by internal means. I therefore resolved to try the external application of opium. The following ointment was directed to be divided into two parts, and one of them to be rubbed into the thigh of the patient, by an assistant, whose hand was ordered to be covered with a soft bladder:

R Opii subtilissime pulv. scrup. i.
Adipis suill. drachm iij.
Camphor. scrup. ss. M. and divide in chartalus duas.

This application seemed to have some sedative effect, aad was therefore repeated in the evening. The next morning, August 1st, I had the satisfaction to find that she had had some comfortable sleep; but the looseness recurring, we contrived to convey ten drops of laudanum again in coffee. The ointment, with an increase of ten grains of opium was continued, and as she appeared more composed, I determined to abide steadily by it. The good effects were each time more evident; sleep almost constantly followed the application of the ointment, though no more laudanum was given internally; her pulse and the intensity of heat were gradually reduced, the diarrhœa was stopped, and on the fourth day from the commencement of this treatment she began to take some wine, acidulated with sulphuric acid. The friction on different parts was persisted in till the 8th of August, inclusively; when the urine having, for the two last days, deposited a proper sediment, and every symptom of fever having disappeared, it was discontinued.

With much respect, I am,

Gentlemen,

Your obedient servant,

THOMAS HENRY.

MANCHESTER,
August 17th, 1799.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

IF you think the following obſervations of any value, I requeſt you to publiſh them.

I have the honour to be,

BATH. Your very humble Servant.

Auguſt 6th, 1799. J. F. DAVIS, M. D.

The extraordinary effects of darnel (*lolium temulentum*, LINN.) related by Mr. MARSH, in the fifth Number of this work, induced me to inquire whether the plant is common in our corn-fields, and whether its deleterious nature had been pointed out by any preceding writer.

The firſt has been ſatisfactorily anſwered by a very intelligent friend, who devotes a great part of his leiſure to agricultural purſuits. He ſays that this ſpecies of darnel is by no means common in this neighbourhood: that he has found it in many parts of the kingdom, but always on farms occupied by negligent farmers, who were not careful to keep their land free from weeds. Several ſpecies of lolium are found in Great Britain, amongſt which the *lolium perenne* and *lolium temulentum*, Linn. are moſt common: the former is the moſt abundant of all the graſſes, growing in paſtures and by way ſides every where; the latter is more rare, growing in corn-fields only.

The powerful effects of the ſeeds of *lolium temulentum*, appear to have been well known. Linnæus obſerves, "Lolium hordeo immixtum pro cerevi ſia conficienda, potatores ſtultos et temulentos reddit."* Whence its trivial name *temulentum*. The French call it *l'yvraie*. He elſewhere ſays, that when made into bread with other grain, it is very injurious, if the bread be eaten hot. Haller informs us, that it occaſions vertigo, intoxication, vomiting, delirium, and convulſions, which terminate in palſy; and adds, that it produced an epidemic diſeaſe amongſt ſome ſoldiers, of which many died ſuddenly. It kills, he ſays, geeſe, and even horſes; but a ſmall quantity mixed with their food, fattens chickens and hogs †. In the ſecond volume of the "*Hiſtoire de la Societé Royale de Medicine à Paris*," are ſome remarks on the effects of *darnel* mixed with corn in bread; communicated to the Society by M. DE LA MAZIERE, of Poitiers. A farmer, his wife, and ſervant, eat bread made of the ſeeds of *darnel* mixed with wheat. The *darnel* was in the proportion of five to one. The two latter were ſeized with vomiting

* Lin. Op. Bot. cur. Gilibert, Tom. 2. p. 404.

† "*Histoire des Plantes Suisses*," Tom. 2 p. 175. Not having the Latin original, I have quoted the French Translation, published at Berne, 1791.

vomiting and purging, and refused to eat any more of the bread. The farmer continued to use it the three following days, and died after suffering the most severe colic pains. I cannot learn, however, that any person has noticed the peculiar affection of the calves of the legs described by Mr. Marsh.

Externally applied, darnel is said to produce anodyne properties, and therefore is recommended by CELSUS in fractures of the ribs: "Gravioribus vero doloribus, urgentibus, cataplasma imponi quoque conveniet, vel ex lolio vel ex hordeo, cui pinguis fici tertia pars sit adjecta*." ARETÆUS administered it in pleurisy; GALEN applied it, mixed with vinegar, to wounds.

P.S. The successful practice of inoculating with cow-pox matter, of which your valuable Journal has been the vehicle, gives me great satisfaction. I am fearful, however, that some observations of mine, communicated to my friends not long since, may have induced them to entertain an unfavourable opinion of it. If so, what follows will, I hope, remove it entirely.

In March, two children (COOMBES and JAMES), were inoculated under my direction, with vaccine matter sent from London by Dr. PEARSON. The punctures inflamed in both children, and formed tumours; but Coombes's only advanced to a state of vesication, James's vanished about the eighth day. Coombes was very feverish and drowsy on the tenth day; while James did not appear to have been at all indisposed. On the twelfth an eruption appeared on different parts of the bodies of both children; two or three pustules suppurated on that of Coombes, but they disappeared on James in a day or two, some indeed in a shorter time. I thought, notwithstanding, that he had undergone the vaccine disease. On applying the test of variolous matter he became infected, and had many pustules. Coombes, on the contrary, resisted inoculation for the variolous disease, and frequently played with James during its progress, without taking it.

Through the friendly assistance of Dr. WOODVILLE, I have since seen a considerable number of patients labouring under cow-pox; and am in consequence fully convinced, that the inflammation was insufficient to prove that James underwent the vaccine disease, and that the eruption was merely adventitious.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

THE following communication I have received from Mr. BARLOW, Surgeon, at Bolton.

As

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* Aur. Corn. Cels. lib. viii. cap. 9.

As Mr. B. alludes to a ſubject which has appeared in the Medical and Phyſical Journal, and as the caſe he relates is of conſiderable practical importance, I ſhall be glad if you will give it a place in the next Number of your uſeful publication; and am,

Your very humble Servant,

MANCHESTER,
Auguſt 11, 1799.

M. WARD.

"Agreeably to your requeſt I ſend you the annexed caſe, which you are at liberty to publiſh or not, as you may think proper.

"I did not keep a journal of the caſe, which will account for my not mentioning every minute particular.

I am, Sir,

Yours, &c.

BOLTON, *Auguſt* 10, 1799.

J. BARLOW.

"Eſther Knowles, aged 49, was ſuddenly attacked about the middle of laſt June, with a ſhooting pain on the inſide of her right thumb, near the ſecond joint. The pain did not continue long; but about the eighth day it returned, and a purple bliſter appeared upon the part, about the ſize of a ſmall pea.

"Not thinking it of much conſequence, ſhe allowed a week to elapſe before ſhe conſulted me. The whole arm was ſwelled, particularly along the courſe of the lymphatics, as high as the axilla, where there was a tumour of the glands. The ulcer, which was about the breadth of a ſhilling, continued ſpreading, and had a gangrenous appearance: the pain was exceſſive, and as ſhe expreſſed herſelf, ſhot from her thumb to her heart.

"I ordered leeches to be applied to her arm, and alſo a fomentation of poppy-heads, and a common poultice, morning and evening.

"On the following day, the inflamation was conſiderably abated; but the pain continued, and the ulcer looked no better.

"I gave her opium, both in the ſolid and liquid form, with as much bark and wine as her ſtomach could bear, which ſhe took a week without much abatement of the pain; the ulcer ſtill ſpreading. She was then ſo weak and faint, that ſhe could not come to me to be dreſſed, as uſual.

"I viſited her the next morning, and found her in bed, her ſtomach rejecting every thing ſhe took, whether food or medicine; and if ſhe raiſed her head, ſhe fainted.

"Having lately read your paper in the Medical and Phyſical Journal, on the effects of opium applied externally, ſo as to be abſorbed by the lymphatics;

phatics; and thinking that plan of treatment worthy of being tried in the present case, I directed a liniment, with six drachms of tincture of opium and an equal quantity of olive oil, combined by the yolk of an egg; the whole of which was rubbed on the inside of the patient's legs and thighs, at three times in the course of the day.

"The next morning she was easier, and the ulcer did not appear to have spread.

"The frictions were continued five days longer, with an ounce of the tincture of opium each day; during which time the pain left her, and the ulcer looked better every day.

"As she had by this time tolerably recovered her appetite and strength, I only saw her occasionally, and gave her, now and then, an opium pill at at night.

"The pulse from the time I saw her, was low, and not remarkably quick."

To the Editors of the Medical and Physical Journal.

Gentlemen,

The insertion of my last paper in your valuable publication was particularly gratifying, and encourages me to trouble you again with a few remarks on the concentration of vinegar, and on some pharmaceutical preparations formed from this acid, which, if they appear of sufficient importance, I have no doubt of your honouring them with your notice.

I am, Gentlemen,

Your obliged humble servant,

Newcastle, *August 6th*, 1799. JOHN PROCTOR, Jun.

The utility of this acetous acid, both as an article of diet and of the Materia Medica, renders an easy method of obtaining it pure, and tolerably concentrated, of considerable value. When it is not contaminated with the mineral acids, it may be deprived of a considerable portion of its aqueous part by freezing; but this is a process which cannot at all times be accomplished, nor even when it can, is it sufficient to deprive it of the other acids which may be mixed with it; and all the common kinds of vinegar sold in the shops are more or less adulterated with sulphuric acid. Distillation frees it perfectly from this acid; but distilled vinegar, being diluted with water, is too weak for many purposes; and where the deprivation of the colouring and extractive matters is not of much consequence, this operation may be dispensed with.

By

By diſſolving pure chalk in a given quantity of vinegar till it be ſaturated, we obtain a ſolution of acetated lime, from which we may ſeparate as much of the watery part as we pleaſe by evaporation; and afterwards by decompoſing this ſolution, by means of the ſulphuric acid, the acetous acid may be thus obtained of any degree of ſtrength required.

When pure vinegar cannot be obtained for this purpoſe, even ſuch as is adulterated with ſulphuric acid can be purified and concentrated by this proceſs with equal ſucceſs. The chalk neutralizes the mineral acid, and forms gypſum, which being inſoluble, is precipitated, and the acetated lime remains in ſolution. This is to be poured off, and evaporated to two thirds, or leſs; as much ſulphuric acid is then to be added as will ſeparate all the calcareous earth, adding it by little at a time, and taking care to avoid an exceſs of it, which may be prevented by trying a little of the vinegar from time to time, with a farther addition of ſulphuric acid, in a ſeparate veſſel; if it is not rendered turbid, it will be neceſſary to aſcertain, with another portion of it, whether the ſulphuric acid does not prevail, by adding to it a few drops of vinegar of litharge, or of a ſolution of ceruſſa acetata. When the point of ſaturation is finally adjuſted, and the gypſum ſeparated by depoſition, the ſupernatant liquor may be poured off; and it will be found to be a very pure and tolerably concentrated acetous acid.

It is however to be obſerved, that in this proceſs the flavour of the vinegar will in ſome meaſure be altered, if not loſt, by the evaporation of the volatile matter in which it reſides; but it might probably be reſtored, or ſome other flavour equally agreeable be communicated to it, by a ſhort digeſtion on wine-lees.

Diſtilled vinegar, as well as that which has not been diſtilled, may be treated in the ſame manner, if it be required to obtain the acid free from the ſavonulous extract combined with it in its crude ſtate. There is no doubt but vinegar thus concentrated might be advantageouſly employed as a powerful antiſeptic in pickling, and its piquancy as a ſauce be conſiderably increaſed by this proceſs.

The London College have given a method of preparing a concentrated acetous acid, by diſtilling verdigris per ſe, which does not appear, however, to be introduced for any other purpoſe than the making of the hydrarg. acet. Either from the apprehenſion of this acid containing copper, or on account of its high price, it has been ſince laid aſide, and another method of preparing the hydrarg. acet. ſubſtituted in the room of the former one, viz. decompoſing a ſolution of quickſilver in nitrous acid, by means of acetated kali. But the uſing of this neutral ſalt is ſtill a needleſs expence, as the precipitate obtained from the nitrous ſolution by the vegetable alkali can be diſſolved in diſtilled vinegar by boiling them together, when the ſame cryſtals of acetated quickſilver are depoſited on cooling, as are obtained by the other more com-

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plicated and expenſive proceſſes. Hence it is evident that the pure acid has a greater attraction for the metallic precipitate, than for caloric or water; ſo that it is only the water of the ſolution that is evaporated, and which, if collected in a condenſed ſtate, would be found totally free from any acid impregnation.

We may obſerve in a number of chemical operations, how much the order of affinities is regulated by circumſtances which require particular attention. Thus, water impregnated with carbonic acid gas ſoon becomes vapid by expoſure to the ordinary temperature of the atmoſphere, while its combination with fixed alkalies reſiſts the heat of boiling water; for the ſubcarbonate of potaſh (ſalt of tartar) is capable of decompoſing concrete ammonia, and combining with the carbonic acid to the point of ſaturation, and the volatile alkali may then be diſſipated by evaporation.

In the preparation of the aq. lithargyri acet. the College direct the uſe of diſtilled vinegar, which is hardly neceſſary: if the common kinds of vinegar be uſed, as ſtrong a ſolution may be obtained, and every way equally fit for uſe, as that made with diſtilled vinegar. During the boiling, the ſulphuric acid is all ſeparated from it, forming with part of the litharge a ſulphat of lead which is precipitated, and the pure acetous acid is left at liberty to ſaturate itſelf with the remainder. Inſtead of boiling the ſolution down to a certain quantity, it would be better to bring it to an accurate ſtandard by weight; as ſuppoſing a long narrow-necked bottle, which, when full, held 1. 0 of water, ſhould hold 1. 3 of the aq. lith. acet.

When the aq. veg. min. is made with hard water, a partial decompoſition of the vinegar of litharge takes place, which is not even prevented by uſing diſtilled water, becauſe part of the lead is not ſufficiently oxydated to keep it diſſolved. If inſtead, therefore, of adding the proof ſpirit (which rather ſerves to increaſe the decompoſition), as much diſtilled vinegar were uſed in its place, a permanently tranſparent ſolution would be had, and of a conſtantly uniform ſtrength. Sugar of lead and ceruſſe ſeem to bear the ſame relation to each other, as corroſive ſublimate and calomel. See CRELL's *Chemical Journal*, vol. iii. p. 8.

The foregoing remarks apply with equal propriety, and much more forcibly to the ſolution of antimonial tartar, both in water and in wine; part of the antimonial oxyd being depoſited in the ſame manner from both ſolvends. I would therefore recommend the rejection of the vin. tart. antim. and a ſubſtitution in its place of a given quantity of emetic tartar diſſolved in water, with the addition of as much of a ſaturated ſolution of cryſtals of tartar as may be found ſufficient to prevent any precipitation. I am perſuaded that the objections to this active medicine, on account of the uncertainty of its ſtrength, would, by this manner of preparing it, be conſiderably done away, and that there would be leſs occaſion for introducing other formulæ, neither ſuperior in efficacy, nor ſimpler in compoſition.

STATE OF DISEASES IN LONDON.

Account of Diſeaſes in an Eaſtern Diſtrict of London, from the 20th of July, to the 20th of Auguſt.

ACUTE DISEASES.	No. of Cases.
Typhus	2
Pneumonia	2
Catarrh	1
Acute Rheumatiſm	3
Variolæ	1
CHRONIC DISEASES.	
Cough	6
Dyſpnœa	7
Aſthma	3
Pleurodyne	3
Phthiſis Pulmonalis	7
Hydrothorax	2
Aſcites	5
Vertigo	3
Paraplegia	1
Epilepſy	2
Syncope	1
Palpitatio	1
Dyſpepſia	7
Gaſtrodynia	5
Diarrhœa	10
Enterodynia	4
Dyſenteria	3
Colica	1
Colica Pictonum	3
Menorrhagia	2

	No. of Cases.
Amenorrhœa	3
Chloroſis	4
Prolapſus Vaginæ	1
Hæmorrhois	3
Enureſis	2
Calculus	1
Dyſuria	3
Nephritis	1
Hyſteria	3
Hypochondriaſis	2
Lepra	1
Herpes	4
Exoſtoſis	3
Lumbago	2
Sciatica	3
Chronic Rheumatiſm	13
PUERPERAL DISEASES.	
Ephemera	2
Milk Fever	3
Menorrhagia lochialis	2
INFANTILE DISEASES.	
Ophthalmia	2
Aphthæ	3
Dentitio	2
Tabes Meſenterica	1
Vermes	3

There has been nothing in the ſtate of diſeaſe during the laſt month, that deſerves any particular attention. The ſtate of the weather, however unfavourable it may prove to the vegetable, does not ſeem to have produced much derangement of the animal economy. The bowels have been the principal ſeat of complaint. A few inſtances of ſlight dyſentery, with a larger number of diarrhœa ſeem to conſtitute the liſt of diſeaſes at preſent prevailing.

Diſeaſes admitted as In and Out-Patients under the care of the Phyſicians of the Weſtminſter Hoſpital, from the 20th of July to the 20th of Auguſt.

Fevers	14
Hepatitis	1
Quotidian	1
Tetanus	1
Amenorrhœa	4
Anaſarca	2
Aſcites	4
Epilepſy	1
Gaſtrodynia	2
Hooping Cough	1
Hemoptoe	2

Aſthenia	6
Aſthma	1
Cough	4
Diarrhœa	9
Dyſpepſia	3
Dyſuria	1
Enterodynia	2
Hemorrhois	1
Hypochondriaſis	3
Impetigo	1

Itch	2	Pleurisy	1
Jaundice	1	Rheumatism	9
Lepra Græcorum	1	Sciatica	1
Lumbago	2	Struma	4
Menorrhagia	2	Urticaria	1
Phthisis	1	Tinea	2
Paralysis	3	Worms	3

List of Diseases from the 20th of July to the 20th of August; being the Result of the Public and Private Practice of a Physician at the West End of the Town.

ACUTE DISEASES.		Pyrosis	2
Measles	9	Enterodynia	5
Scarlatina	1	Diarrhœa	13
Small-pox	1	Cholera and Bilious Vomiting	3
Hooping-cough	3	Colica Pictonum	1
Contagious malignant Fever	7	Hæmorrhoids	4
Synochus, or Summer-fever	4	Fluor albus	5
Slow fever and Hectic	4	Menorrhagia	5
Catarrh	6	Amenorrhea, &c.	7
Acute Rheumatism	2	Jaundice	2
Erysipelas	1	Scirrhus of the Liver	1
Inflammatory Sore-throat	3	Scirrhus of the Womb	2
Child-bed and Milk-fevers	3	Prolapsus	1
Acute Diseases of Infants	8	Dysury	1
CHRONIC DISEASES.		Worms	2
Asthenia	28	Rickets	3
Chronic Rheumatism	10	Scrophula	4
Dropsy	8	Tabes Mesenterica	2
Paralysis	2	Lichen	2
Apoplexy	1	Lepra	1
Cephalæ	5	Scaly Tetter	3
Hysteria	2	Urticaria	1
Epilepsy	1	Roseola	1
Cough and Dyspnœa	15	Erythema	1
Hæmoptoe	2	Ringworm	1
Pleurodyne	1	Itch and Prurigo	13
Pulmonary Consumption	5	Porrigo	2
Dyspepsia	12	Acne	3
Gastrodynia	7	Lupus	1

The long continuance of wet and cold weather has not produced in the course of the two last months, any considerable extension of diseases. The measles have been the prevailing contagious epedimic; and, contrary to the position of Sydenham, have spread more widely since the solstice. The disease has however appeared in a very mild form; as it usually does in the summer months, with but a slight cough, and little fever.

The malignant contagious fevers occured in the close and crowded dwellings of the poor. That the number of them should be greater than usual, was probably owing to the long series of damp and windy days, which confined most of the individuals of families at home, and prevented ventilation, by open windows, &c. Nevertheless induction, from the experience of many years, enables me to ascertain, that mild open winters, and chill, even though moist summers, are on the whole, most favourable to the health of the inhabitants of London. R. W.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

IF you think the following remarks on Digitalis Purpurea worthy a place in the Medical and Phyſical Journal, you are at liberty to diſpoſe of them as you may think proper, and I have the honour to be,

Gentlemen,

SUDBURY, SUFFOLK, Your obedient ſervant,

Aug. 4, 1799. L. MACLEAN, M. D.

Among the many valuable facts and obſervations with which the Medical and Phyſical Journal abounds, thoſe which relate to the Digitalis Purpurea are not the leaſt intereſting. It is with pleaſure I obſerve the real properties of this long-neglected vegetable begin at length to be known in different parts of the world. It has long been a favourite medicine with me, and this partiality is founded on the fulleſt evidence of its extraordinary efficacy, in ſome of the moſt formidable diſeaſes incident to mankind.

When I fixed my reſidence in this country (nine years ſince the peruſal of Dr. WITHERING's excellent work), what I had ſeen and heard of its efficacy in dropſy impreſſed on my mind ſo favourable a bias towards it, that I was anxious for opportunities of putting its virtues to the teſt. The reſult has been extremely ſatisfactory. After ſeveral diſappointments, ariſing from the quality of the preparations at firſt uſed, my ſucceſs for upwards of five years has exceeded my moſt ſanguine expectations.

In the courſe of my experience, many circumſtances attracted my notice which I was before unacquainted with, and which induced me to pay more than ordinary attention to its peculiar effects on the living fibre. Theſe I began at an early period to minute down in my Journal, intending to commit them to the preſs as ſoon as they appeared ſufficiently intereſting for public inſpection. But the ingenious communications of Doctors FOWLER and DRAKE, the comments and additional reports of the learned Editors of the valuable works in which they are inſerted, lead me to deviate in ſome degree from my original deſign, and to introduce, without farther delay, to public view, the general reſults of my experience of the fox-glove in conſumption, and a few other diſorders, ſelected from the more detailed caſes and obſervations recorded in my Note-book.

I am aware my experience has as yet been too limited to enable me to ſpeak with preciſion of the real extent of its powers in conſumption; yet when I hear men profoundly verſed in medical ſcience mention it in terms of the moſt extravagant commendation, ſtamping upon it a character little ſhort of

infallibility, while others ſpeak of it as a deſtructive poiſon, that muſt be reſorted to with the greateſt circumſpection, and many are totally ignorant of its real properties, doſes, and mode of exhibition, I truſt I may be pardoned thus prematurely intruding my obſervations on the public.

I am perpetually hearing that Dr. Drake has diſcovered a ſpecific for conſumption; and although this is to be attributed to the well-meant, but miſtaken zeal of his friends, yet the concluſions * deduced from the ſucceſsful reſults of two caſes, are obviouſly calculated to inſpire the fulleſt confidence in it;—a confidence which the bark in intermittents, or mercury in lues, ſcarcely warrants.

The reſult of the firſt few trials † made by Dr. Beddoes was not very encouraging; but his ſubſequent experience ‡ of it has been ſo flattering, that he is induced to hold out the moſt ſanguine expectations of it.

Dr. Fowler's ſucceſs § has been great alſo; yet, like a true philoſopher, a cautious and experienced practitioner, he has contented himſelf with merely detailing the caſes, leaving the public at liberty to draw their own concluſions, withholding *his* until farther trials might enable him to ſpeak more decidedly of the real powers of the medicine.

Dr. Beddoes's name is familiar wherever the ſciences are cultivated, his capacious mind having embraced every branch of them; and his zeal in making his labours and diſcoveries more eſpecially ſubſervient to the health and comfort of his fellow-creatures, is highly meritorious, and lays the public under weighty obligations to him.

Dr. Fowler likewiſe ſtands deſervedly high as a man of ſcience, and a judicious practitioner.

Dr. Drake, too, I know, from perſonal acquaintance, to be a man of character and of talents.

Hence the high encomiums beſtowed upon the fox-glove in conſumption, by ſuch reſpectable authorities, muſt neceſſarily have conſiderable influence, not only within the immediate ſphere of their practice, but with the medical world at large.

But whether ſubſequent trials be attended with effects equally happy, the public will ſpeedily be in poſſeſſion of evidence ſufficient to enable them to decide.

* "Medical Contributions," p. 486. "Medical and Physical Journal," p. 291.
† "Medical Contributions," p. 521. "Medical and Physical Journal," p. 293.
‡ "Essay on Consumption," p. 270. "Medical and Physical Journal," p. 384.
§ "Medical Contributions," p. 500. "Medical and Physical Journal," p. 291.

decide. If even it fall short by ſome degrees of performing what is promiſed from it, there will, as Dr. Beddoes emphatically expreſſes it, " be a cauſe for national rejoicing, greater and more univerſal than has before occurred *."

My own experience in upwards of twenty caſes will not ſuffer me to ſpeak in ſuch high terms of it. I have certainly found it a moſt valuable antiphthiſical remedy, and although I truſt it will be found by others the moſt efficacious that has hitherto been reſorted to, yet its powers are limited, even in the early ſtages.

I was firſt encouraged to preſcribe it in pulmonary conſumption, from the happy effects experienced from it in the chronic cough, dyſpnœa, diſtreſſing pain and ſtricture acroſs the cheſt frequently attending hydrothorax, and ſometimes remaining after the ſerous fluid was evacuated. It was exhibited under the moſt favourable impreſſions, and when my mind was not influenced by theory, and no circumſtances tending to inſure its ſucceſs were overlooked. The caſes were not ſelected for my purpoſe, but ſuch as chanced to fall under my care in the regular routine of practice. Some of theſe were of the true genuine conſumptive kind (by which I mean, that which ariſes under peculiar circumſtances of conſtitution, accurately delineated by ſeveral authors; is in general hereditary and connected with a ſcrophulous habit; appearing from ſixteen to thirty, but more eſpecially under twenty years of age, and ſweeping away whole families, particularly females, no leſs diſtinguiſhed for high mental endowments, than by beauty and perſonal accompliſhments, without even being checked in its fatal career); others ſupervened to neglected or improperly treated catarrhal affections, and pneumonic inflammation, at various ages and apparently unconnected with this peculiar habit, and theſe were at various ſtages, and conſequently of different degrees of violence.

The ſucceſs of the fox-glove, as is the caſe with every remedy, was proportioned to its early exhibition. Inſtances continually occur to practitioners with all the characters of phthiſis, but without the exiſtence of tubercles; there is inceſſant cough, ſometimes with copious expectoration of a yellow-matter, ſometimes without; the hectic fever, with morning or evening exacerbations, or both, and night ſweats, are ſtrongly marked. Such inſtances are more common among huſbandmen than others, and ariſe from their continuing their labour in the fields, expoſed to all the viciſſitudes of temperature, under violent colds or catarrhal affections; but if the phthiſical habit does not exiſt, they frequently yield to a particular treatment. In theſe the

* "Essay on Consumption," p. 271. et seq.

the fox-glove will be found an excellent remedy. Many cafes of chlorofis are of this defcription: there is cough, generally dry; pain of the fide, chillinefs, fucceeded by heat, intenfe thirft, and fometimes night-fweats. Many fuch, that had been pronounced confirmed phthifis by a noted confumption-doctor, have been reftored to health under my care, by means of fteel, myrrh, bark, with faline medicines occafionally, and fuitable regimen. The true, genuine, fatal difeafe, however, is fometimes ufhered in, or attended with chlorotic fymptoms.

But although the fox-glove is chiefly to be relied upon in fuch cafes and in the early ftages, yet I was fortunate in refcuing a few from death, after all other means failed. Two of thefe, Mr. BREWSTER, of Melford, aged thirty-two, and Mifs L. CANHAM, of Edwardfton, aged fifteen years, I attended with Mr. EDWARDS, of Melford, and Mr. WYNNE, of Boxford; to whofe kindnefs in attending to the plan I recommended, and in preferving minutes of the cafes, I feel much indebted. The tincture was the preparation ufed. Mr. Brewfter was kept for fome weeks under its full influence; Mifs Canham not fo long. Four of Mr. Brewfter's family, and as many of Mifs Canham's family died of confumption.

Some of my patients for a time, "advanced," to ufe Dr. Beddoes's expreffion, "with a firm pace towards recovery;" but the pace became gradually lefs and lefs firm, until they ceafed at length to make any progrefs; and after remaining ftationary for a certain time, all the unpromifing fymptoms returned in the fame gradual manner they had receded, and the diforder terminated its fatal career in defiance of all my efforts. In a few, however, when by the aid of the digitalis, the hectic fymptoms were fubdued, and only weaknefs remained, tonics completed the cure.

In the cafes of two young ladies (fifters) in this neighbourhood, the one feventeen, the other fifteen years of age, labouring under confirmed phthifis, apparently much more favourable than thofe I have related of its fuccefs, it completely failed. It was firft given in powder to one; afterwards in tincture to both, in combination and alone; introduced gradually and increafed to the fulleft extent the habit was capable of bearing; or at once in large dofes. It was repeatedly difcontinued, fometimes by degrees, fometimes fuddenly, for fome time, and then had recourfe to again, but in vain. The fymptoms were evidently for a time not only relieved, but checked in their progrefs in both. The elder for feveral nights could not fleep without a full dofe (gtt. xxx.) at bed time. This for a time infured a good night, but it ultimately ceafed to do any good; and the elder is finking under the difeafe, while the fituation of the younger is extremely precarious, and all medicine

has

has been abandoned as uſeleſs. In one the diſorder had been checked more than once before, but the means failed now; and an elder ſiſter fell a ſacrifice a few years before, after the progreſs had been ſuſpended during the ſummer months three different ſeaſons.

Mr. Harrold, of Nayland, an intelligent practitioner, on whoſe fidelity and accuracy in attending to its effects, in the intervals of my viſits, the fulleſt reliance may be placed, was equally deſirous with me in giving the digitalis a trial, and equally intereſted in its ſucceſs. Hence it may be ſuppoſed to have had a fair chance.

On the whole then, the fox-glove will be found a valuable remedy in conſumption. It will ſometimes cure when the moſt approved remedies fail. When of itſelf it is inſufficient to ſubdue the diſeaſe, it will prove a valuable auxiliary to other means. It has always, with me, quieted and ſoothed the ſufferings of the patient more or leſs; and where it ultimately failed, it lengthened the duration of life, and ſmoothed the avenues to death.

This is all I apprehend it will be found capable of performing; but this is doing a great deal. Thoſe who expect wonders from it, or that it will *in general* cure conſumption, will be diſappointed. I lament it is not poſſible for me at preſent to form a correct eſtimate of the proportion of ſucceſsful to the unſucceſsful caſes, becauſe I ſee the moſt ſerious evils begin already to reſult from its not anſwering the high expectations that have been raiſed.

A phyſician of eminence and extenſive practice in this county, from the ſtrong recommendation of Dr. Drake, was readily induced to give trial to it in three caſes of phthiſis, and he aſſured me it had fair play; but from its failure in all, he can ſcarcely be prevailed upon to have recourſe to it again. In one of theſe the diſeaſe was afterwards ſuſpended for ſeveral months, by change of air and ſuitable regimen, under the direction of a phyſician of eminence in town, who reprobated in pointed terms the exhibition of fox-glove, and I hear, declared the caſe not conſumption. But the lady has lately fallen a victim to the moſt confirmed and diſtinctly marked hectic that ever occurred.

Others begin to loſe their confidence in it from ſimilar failures, whereas, had it been brought forward with its true character ſtamped upon it, this would not be the caſe. Digitalis will be found highly beneficial in aſthmatic affections, coughs of every kind, dyſpnœa, and other chronic affections of the cheſt and lungs. It promiſes to prove uſeful in hooping-cough; and to thoſe who may have opportunities, it is worthy a trial: none have as yet occurred to me.

In

In a most formidable case of pleurisy, where the use of the lancet was judged imprudent, it acted like a charm. In this case (a young man aged eighteen), the breathing was more quick, difficult, and anxious than I had ever observed it in any instance. The countenance was expressive of the greatest distress. The pulse was 112 and feeble, with general prostration of strength. The danger seemed imminent, and if he survived the present urgent attack, phthisis as a consequence was to be dreaded. The pulse was in a few days reduced to 48, and permanently kept from that to 56. The surgeon who attended with me numbered it once at 46. This was the only instance that occurred to me, where neither the stomach or head were affected under so great a reduction.

Mr. Harrold informs me, a youth about nine years of age was speedily cured by the digitalis of a violent convulsive cough, which before baffled all his efforts.

It promises to prove permanently successful in a case of distinctly-marked epilepsy. Master Tweed, aged fourteen, had been subject to frequent returns of epileptic fits from early infancy, the longest intervals being three days, and he frequently had three in one day. Every remedy that has been recommended for this disease, both by regular and irregular practitioners was tried, but in vain. At my request, the fox-glove was given in substance, made into pills with confect. aromat. under the immediate direction of his father, an eminent surgeon at Bocking, in Essex. The first week after beginning it he had three fits, the last on the 12th of December last. He has remained perfectly free since, and from having almost constant stupor, great languor, bloated, swollen countenance, with impaired strength and appetite, his health is perfectly restored, and he is become brisk, lively, and active. He was kept under its influence, more or less, for upwards of five months.

I have tried it in another case since, for upwards of a month, but was obliged to discontinue it from my stock of tincture being expended. It seemed to lengthen the intervals from a week to a fortnight, but the fits were more violent. My hopes in this case are not very sanguine; but the fox-glove deserves farther trials in epilepsy.—The pulse was preternaturally slow in this case, being 67 before beginning the tincture, and it may be worthy of remark, that when under its full effects, it was in general quickened. Thirty drops, three times a day, was the utmost extent to which it could be carried, though a strong, active young man.

Some of the most remarkable Effects of Fox-glove.

It is necessary for those unexperienced in its use to be in possession of cer-

tain

tain *criteria* to direct them in its exhibition, and to enable them to judge how far they may venture to proceed with safety. The most common effects observed from full doses, are vertigo, pain, or throbbing of the forehead, or in the bottom of the orbits; imperfect vision, as if a cloud or mist were passing before the eyes, or as if small spots were moving or dancing in the air; nausea of the most distressing kind, and vomiting; reduction in the frequency of the pulse, or extreme irregularity of it. Sometimes it beats in a slow, uniform, regular manner, and becomes fuller than before. More generally, however, from being slow, it runs on rapidly for a few pulsations, then resumes its former standard, or the finger loses now and then a complete stroke. When slow it is quickened on the slightest bodily exercise. I have never been able to reduce it under fifty in phthisis, without the head and stomach being affected; so that those who expect to succeed in reducing the pulse to any considerable degree without these effects, will be disappointed. In dropsy, where the excitability is not in general so great, this may be done more readily. Some stomachs are extremely susceptible of it, while others bear a full dose without inconvenience. Twenty drops of the tincture sometimes produce immediate but temporary nausea, before the habit has felt its effects. Drowsiness often occurs to a great degree, and from passing restless nights they sleep sound. The intellectual operations are greatly disturbed, for my patients become unfit for any occupation that requires mental exertion. But the most striking effect arising when under its full influence is, to use their own words, "a faintness or sinking at the stomach, as if their life was going from them," different from any thing they ever experienced before. This attracted my attention more than any other, because they all complain of it, and nearly in the same words. When this exists to a very great degree, with constant disposition to fainting, extreme languor, and cold, clammy sweats, it has been carried beyond due bounds, and we ought instantly to desist. The urine, from being high coloured, and depositing a thick sediment, sometimes assumes its natural colour, and is increased in quantity; at other times it is not sensibly changed.

I generally begin with from ten to fifteen drops, three times a day, increasing two drops every second day, until the habit begins to feel its influence. I then desist, and afterwards diminish in the same gradual manner, or augment the dose according to the effect. By these means, the body may, with the greatest safety, be kept under its influence for weeks, and even months.

When there is intense heat and thirst, with flushed cheeks, I direct it to be given in a saline mixture, or draughts; and when these and the ordinary hectic symptoms are subdued, and only weakness remains, tonics are generally

rally neceſſary to complete the cure. It is a miſtaken idea that ſtimulants muſt be given in combination with it.

The diſtreſſing nauſea and ſickneſs do not interfere with its ſalutary effects; the immediate relief ſometimes experienced after vomiting, leads me to think they contribute to its ſucceſs; and, from the quantity of bile and viſcid mucus thrown up, without much exertion, the biliary and pancreatic ſecretions ſeemed increaſed by it. The appetite, from being conſiderably impaired, becomes ſometimes very keen, and they can eat heartily during the intervals of nauſea and vomiting. I never knew the bowels violently affected by it in phthiſis, as they frequently are in dropſy; but it keeps them moderately open: nor have I ever obſerved ſalivation or the ſweetiſh taſte of the mouth from it; but this may be owing to my experience being much more limited in conſumption.

In anſwer to the epithets "dangerous, deleterious", and the like, that are continually beſtowed upon it, I think it incumbent upon me to obſerve, that a fatal inſtance never occurred from its uſe, under my care; and I have, I am perſuaded, preſcribed it in upwards of 200 caſes, nor have I ſeen alarming ſymptoms from it, except in two inſtances, where from neglect it was increaſed after the habit was under its full dominion; and I will venture with confidence to affirm, that any ſerious conſequences that have ariſen, or may ariſe, from it, have been, or will be, from inattention to its effects; as it invariably gives full warning of its deleterious qualities. The moſt valuable medicines in our poſſeſſion, or even the moſt ſalutary ſubſtances, will prove injurious, if adminiſtered to exceſs. It is unfair to argue of the uſe of any ſubſtance from the abuſe of it. Opium, tartar emetic, the active preparations of mercury, and many other valuable remedies, are deſtructive poiſons if adminiſtered in undue quantities.

Mode of Preparation and Exhibition.

It becomes an object of importance to have a preparation as a general ſtandard which poſſeſſes its virtues unimpaired at all times, and can readily be procured at all ſeaſons, as medical men will then be preſcribing and making obſervations on the ſame remedy, which is really not the caſe at preſent. The infuſion or decoction of the freſh leaves are preferred by Dr. Fowler, but as the plant is not to be had in many diſtricts, even counties, and where it is, as a ſcanty ſupply only is to be procured in winter, with its virtues probably impaired, this preparation is, on theſe grounds, inadmiſſible.

I always uſed the powder in ſubſtance, or the infuſion of the dried leaves in conſumption, as I had done in dropſy, until I heard that Dr. Drake

attributed

attributed his ſucceſs in the two caſes alluded to, to the tincture. I have ſince uſed it in ſeveral caſes, and now give the preference to it, not becauſe I think it poſſeſſes ſuperior virtues to any of the other preparations uſually reſorted to, but becauſe the doſe can with more certainty and accuracy be regulated, and it retains its active properties longer, moſt probably, for years. I imagined at firſt, it acted more readily on the heart, without affecting the ſtomach or head, but I am now convinced, this is not the caſe. In dropſy the other preparations merit a decided preference, as they act more readily on the abſorbent ſyſtem, at leaſt in taking up ſerous fluids.

Having experienced ſo many diſappointments from the quality of the medicine when I firſt began to preſcribe it, I have for ſome years cultivated the plant in my garden, whereby I have reaſon to believe its virtues are improved: they certainly are not impaired. The leaves have a greener hue, are thicker, more tender and ſucculent than thoſe growing in the natural ſtate. Theſe are often ſurrounded by weeds and other plants, which deprive them of a ſufficient ſupply of light, air, and nutriment from the earth, and thereby prevent them from attaining to full perfection. When the ſtalks grow thick, ſtrong, and tall, with a full ſupply of large, thick, green leaves, the plant is in full health and vigour. I begin to gather the leaves when the lower bloſſoms are fully expanded, and I have a ſecond crop of ſmaller ones; but the time of gathering is of little conſequence provided they appear green and healthy. They are either dried ſlowly in the ſhade, or quickly in the ſun, or near a fire; but they muſt not be alternately in the ſun and ſhade, otherwiſe they loſe their colour and their virtues. I paſs a packthread through the ſtalks, and ſuſpend them in the ſhade, where a current of dry air paſſes through them. When thoroughly dried, they are packed cloſe in brown paper bags, and ſuſpended near the kitchen fire. In this manner they will retain their active properties unimpaired for a long time, but I never truſt to them for more than one year. When wanted for uſe, no more than will ſoon be conſumed ſhould be powdered, as, by frequent expoſure to the air, the powder ſpeedily becomes an inert ſubſtance. I wiſh particularly to inſiſt on theſe precautions, becauſe few vegetables require greater care in preparing; and becauſe I know many diſappointments have ariſen from the want of them, which have operated powerfully againſt the more general introduction, and conſequently the ſucceſs of this valuable article. What is ſent from London is mixed with the ſtalks, and is of no uſe. I have preſcribed it to the extent of ſeveral grains, without the ſmalleſt effect, and from ſeveral failures, I had nearly abandoned, as uſeleſs, a medicine, which I have now no heſitation in

affirming, is one of the most valuable in the whole range of the Materia Medica.

A single grain of the powder prepared as above, the fibres being carefully excluded, is a medium dose for an adult to begin with, and taken evening and morning, with a little confect. aromat. has frequently evacuated the water in general anasarca, in forty-eight hours. A grain and half, however, may in general be began with, twice a day, increasing half a grain a dose every second day, until some effect be obvious. The leaves when dry, should appear green, and have a flavour like found fresh hay.

I have tried various proportions of the leaves to spirituous menstrua, for tinctures. The proportions recommended by Dr. Darwin, are an extravagant waste of the leaves, and of the tincture; for without the strongest pressure, a great portion of the latter is lost. I have found that of the tincture made according to the following formula, which I beg to submit to the consideration of the learned College for insertion in their Pharmacopœa,

I have never been able to exceed gtt. xxx. ter. in d.

R/ Folior. digit. purpur. recent. exsiccat. unc. i.
Sp. vin. ten. unc. viij. M.
Digere leni calore per dies septem dien cola.

Or the following, which I still prefer, as having the plant in its perfect state:

R/ Folior. digital. purpur. recent. unc. iv.
Sp. vini. rect. unc. v. M.
Digere dies septem leni calore dien cola.

This makes a beautiful dark-green tincture. I have found by drying the leaves, that they lose from three-fourths to four-fifths (for they vary much in the degree of humidity they contain) of their weight; so that in the above formula I allow three ounces of water contained in the leaves, to the five of pure spirit, which is a larger proportion of the spirit than is contained in the first formula, but nearly the same of the leaves. For infusion dr. ij. of the dried leaves, to unc. viij. of boiling water, suffered to remain in a close vessel till cold, make a very strong infusion.

Were the College to admit these, or any better formulas that may be presented to them, their sanction would give more general currency to the fox-glove.

I have for some years supplied the practitioners with whom I prescribe this medicine; very few, till lately, at my request, paying attention to its prepa-

preparation. I have now some pints of the tinctures made as above, and some pounds of the leaves in my possession, and though my consumption increases yearly, shall be happy in furnishing any of your numerous readers who may be desirous of giving trial to them, with a portion of either.

I have requested Mr. Brown, Wholesale Chemist and Druggist, Lothbury, London, to collect a quantity of the leaves of this season, and gave him the necessary directions for making the tinctures, &c.

Conjectures respecting its Mode of Action.

I should not, in this little abstract, have entered into any speculative opinions on its *modus operandi* on the living fibre, did I not see theories advanced (on which indications of cure are grounded), that appear to me totally inadmissible.

That its good effects do not always depend upon its power of diminishing secretion, and promoting absorption, as maintained by Drs. Fowler and Drake, is obvious from this, that it is equally, and indeed, more efficacious in cases where there is no increase of mucus or pus.

Dr. Drake affirms, "that it has been ascertained, that hectic fever arises only from the matter of an open ulcer." But however high the authorities that may be adduced in support of this opinion, daily observation contradicts it.

In the early stages of consumption it is well known, that the hectic fever is often clearly and distinctly marked, without any increased expectoration, and when the tubercles are still in their infancy, and consequently before they have suppurated. Scrophulous enlargements of the mesenteric glands, will, I believe, produce confirmed hectic, and destroy life, without arriving at maturation. This, if I mistake not, I have repeatedly observed in children whose parents, especially the mothers, were consumptive, or had scrophulous affections externally on the body. Females who have survived two or more pregnancies under phthisis, sometimes produce children that are hectic at birth, and die of marasmus, from mesenteric indurations, in early infancy.

In convulsive coughs its good effects are equally conspicuous, where there is no inordinate secretion to lessen or absorb.

Nor does its efficacy depend *entirely* on the reduction of the contractions of the heart; for in some of my patients, the cure was completed without any remarkable diminution of the frequency of the pulse.

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On looking over the report of Miſs Canham's caſe, the pulſe was only once brought to 48, and this and the preceding day, when it was at 52, the ſtomach and whole body were ſo diſordered that ſhe was confined to her bed. The following day the digitalis being diſcontinued, it roſe to 66, and except once that it was 64 and 84, 90 is the loweſt number I obſerve in my notes. Brewſter's never uſed to be reduced lower than 90, and this only once. In both it was originally extremely frequent and ſmall, from 120 to 140.

In a caſe of confirmed phthiſis, with diſtinctly marked ſcrophulous habit, now under my care, which promiſes to do credit to the fox-glove, the pulſe was only 64, prior to his beginning it, which I conſidered as preternaturally ſlow; and it is remarkable, that it has been quickened by it; having been 68, 72, and 76, when examined ſince, nearly at the ſame hour, and under the ſame circumſtances. The head and ſtomach are affected to a great degree by twenty and twenty-two drops of the tincture, three times a day. In this perſon, beſide the ordinary effects, objects ſometimes appear of a green colour that are not ſo in reality.

It is obvious, however, that if the blood can be made to paſs through an organ whoſe excitability is morbidly increaſed in a very high degree, 60 or 50 times in a minute, or even leſs, inſtead of 140 or 120, a very important end will be obtained.

But the theory on which Dr. Drake particularly inſiſts, and on which his curative indications are chiefly built, appears to me liable to inſuperable difficulties.

"It has been lately maintained," ſays he, "by the moſt celebrated phyſioligiſts, among whom Mr. HUNTER ſtands foremoſt, that pus is a ſecreted fluid, the conſequence of certain diſeaſed motions of the extremities of the blood-veſſels; it has been likewiſe aſcertained, that hectic fever ariſes only from the matter of an open ulcer; that what is termed laudable pus, when ſecluded from the air is neither capable of creating fever, nor, except by its gravity, can it irritate the parts on which it reſts. When pus, however, is expoſed to atmoſpheric air, it rapidly attracts oxygen, an acid of a peculiar kind is generated, and hectic fever, the effect of the abſorption of aerated matter, is produced. Now as an ulcer of the lungs is perpetually expoſed to a ſtream of air, and of courſe an ichorous poiſon, continually forming by the union of oxygen with ſecreted matter, an important curative proceſs would ſeem to ariſe, from promoting abſorption ſo rapidly from the ſurface of the diſeaſed parts, that the pus ſhall be taken up as ſoon as ſecreted, and conſequently its combination with oxygen prevented." *

That

* "Medical Contributions," p. 480.

That pus was a secreted fluid I have long believed; that it attracts oxygen, I do not pretend to deny; and that an acid of a peculiar kind may be generated, I take for granted, because it is presumed the fact has been ascertained by experiment; but that the inferences deduced from these premises are founded in fact, I see neither evidence nor probability. That hectic arises from collections of matter in different parts of the body, and more especially from vomicæ in the lungs themselves, without any communication with the external air; and that the fluid thus formed, is frequently not a laudable pus, but a thin offensive ichor, it is only necessary for me to call instances to the recollection of every medical man of observation. It is still more difficult to admit that the hectic fever arises from the absorption of the peculiar acid, or ichorous poison, generated by the union of oxygen with pus. If this were the case, the thick bland matter secreted from every wound or ulcer, when exposed to a stream of air, would become an ichorous poison, and be productive of the effects mentioned by Dr. Drake; but that this does not in reality happen, daily observation sufficiently evinces. Even in the lungs themselves, when from pleurisy or pneumonic inflammation, suppuration happens in a constitution previously sound, good, thick pus, without any fœtor, is sometimes formed; and we continually observe both in the lungs and other parts, the acrid offensive ichor of ulcerated surfaces, converted into a copious secretion of what is termed laudable pus; whereas, while any is continued to be secreted, being equally exposed to the air, it ought still, acording to this theory, to be a thin ichor. It appears to me obvious, that cause is here confounded with effect, and effect with cause; and that the ill-conditioned matter thus poured out, is the immediate consequence of the highly morbid state of the vessels secreting it, as well as of the whole body, and not of any subsequent changes it undergoes; and that it will be vain to attempt to improve the one until the other be corrected. A wound or ulcer in any part of the body under confirmed hectic, would most probably discharge a thin offensive ichor, and every judicious surgeon would endeavour to correct the morbid condition of the habit which occasioned it, before he expected to succeed in healing it. Good pus he would look for as a necessary consequence; nor would he under any circumstances, endeavour to promote its absorption.

A peculiar delicacy of constitution, with a high degree of susceptibility, both of body and mind, are mentioned by all authors as characterising the true genuine phthisical habit. Hence the slightest causes often produce the most powerful impressions. The circulation is accelerated by stimuli, which

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in others produce no more than the healthy actions. A cough, pain of the side, or some local affection, supervene to every little expofure to cold, or tranfition of temperature; and a cough once arifing in fuch habits, without extreme caution, will foon lay the foundation of the difeafe. The inflammation of the mucus membrane and bronchial glands, at firft trifling, proves a conftant fource of irritation to the whole habit. The blood will be urged with increafed velocity through every part; and the mufcles fubfervient to refpiration being thrown into repeated convulfive actions, the pulmonary fyftem will more efpecially fuffer from the effects of congeftion, diftention, increafed action, and impetus. Indurations of the glands, or tubercles, will be formed, which, by degrees, run through the progreffive ftages of inflammation and fuppuration; and as the pus thus generated cannot be expected to be of a good bland kind, it proves by its acrid qualities, like oil to a lamp, additional fuel to the flame which gave birth to it. I do not mean to infer, that this is always the progrefs obferved by the difeafe, but believe it is often fo of the moft dangerous and fatal kind; and whatever way it originates, the effect will be the fame. To leffen or remove this morbid excitability fhould be the grand object of our art to attain, if we expect to be fuccefsful in preventing, or when once formed, in permanently removing confumption. But this is extremely difficult—often impoffible. Not only the diet, drefs, peculiar habits and occupations, but the climate itfelf, muft be changed, before fo important an end can be gained. When tubercles are once formed to any confiderable extent or degree, efpecially in fcrophulous habits, where the glandulous fyftem is in a ftate of continual predifpofition to inflammation of the moft hopelefs kind, it is often too late. The fox-glove, however, feems to me to poffefs powers over every other remedy yet known, in correcting this morbid condition of the whole frame, and the train of morbid phenomena refulting from it. And it is to thefe I have been difpofed to attribute, in a great degree, its falutary effects in this deplorable malady. If it frequently poffefs fuch controul over the heart as to reduce its contractions from 140 and 120 to 50 in a minute; if it allay, as it does in a moft extraordinary manner, the cough and irritation of the lungs, and indeed of every part, the advantages thence refulting will be incalculable. The veffels of the difeafed lungs will be placed in a condition of fecreting bland, healthy fluids, every organ in a ftate of performing its healthy functions, and thus the unifon and harmony which conftitute the healthy ftandard will be eftablifhed throughout the body.

As in other cafes the lymphatics are the artificers, or active agents employed by Nature in removing inorganic matter, either folid or fluid, that

that has no other ready outlet; ſo in this, what cannot readily be expectorated may be taken up by them and eliminated through the various emunctories. But whether they poſſeſs the extenſive powers attributed to them by Dr. Fowler, and which they certainly do in abſorbing ſerous fluids, appears to me extremely doubtful.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

IF you ſhould eſteem the following general obſervations on the *animal nature* and *properties of vital power*, deſerving a place in the department of your Journal appropriated to phyſiological ſpeculations, they are at your diſpoſal.

I am, Gentlemen,

Your's reſpectfully,

BRISTOL, *July 17th*, 1799. ROBERT KINGLAKE, M.D.

No inquiry has engaged the zeal of modern philoſophy with more ardour than the phenomena of vital power; and much ſubtility of reaſoning, and ingenuity of talent have been exerciſed on the ſubject, with various ſucceſs. The difficulties which nature preſents in this reſearch appear to be leſs formidable than thoſe which have ariſen from the errors of artificial inveſtigation. The real order of things is oftener overlooked, by allowing undue licenſe to efforts of imagination, than correctly perceived.

A notion of variety of power neceſſarily induces a correſpondent complexity in the opinion of its operation, and but too frequently eclipſes the more ſimple and intelligible courſe obſerved by the undeviating laws of nature.

To enumerate the various hypotheſes which have been, through every ſucceeding age, from remote antiquity to the preſent time, conceived and promulgated on this queſtion, would be at once unprofitably tedious, and inconſiſtent with ſuitable brevity; it is ſufficient to remark, that the labours of elapſed centuries on this topic have ſcarcely afforded information enough to ſerve as a rallying point to the modern diſtreſſes of ſpeculative deluſion. This diſaſtrous want of ſucceſs may be juſtly aſcribed to an intemperate deſire to explain, by precipitate generalization, what a cautious and ample accumulation of facts can alone develope.

Inſulated facts are not leſs uſeleſs than a deſultory and diſcordant concatenation

tenation of them is obſtructive to the progreſſive improvement of ſcience. Truths, if ſuſceptible of legitimate union, require no adventitious aid to be ſyſtematized, but combine with natural and obvious facility; and when the connection does not ſpontaneouſly and evidently obtain, there is ſtrong reaſon to preſume, that ſome extraneous obſtacle, or deficient link, interrupts the continuity of the chain.

To avoid ſtumbling on the difficulties alluded to in the preceding obſervations, it is here only deſigned to ſuggeſt a few reflections on the apparently elementary nature of animal excitability.

This vital property is ſo inſeparably connected with the various conditions neceſſary to animal life, that it can no more be conſidered abſtractedly, than an effect can be intelligibly examined independently of its cauſe: it cannot, for the ſhorteſt duration, exiſt in a ſtate of diſorganization, in any manner cognizable to the human ſenſes; it muſt therefore be contemplated not as a cauſe, but as an effect reſulting from an uniform aſſemblage of operative laws, appoſitely preſcribed by phyſical neceſſity.

Now, as effects muſt neceſſarily aſſume and indicate the ſpecific character and diverſity of the cauſes from whence they originate, ſo in the various ſtructure and organization of the animal machine, is ſtrikingly exemplified a peculiar difference of excitability, accurately correſponding with the particular phyſical and chemical powers, reſpectively connected with ſuch diſſimilar conſtruction of parts.

Could the human eye be rendered ſufficiently microſcopic, to pry diſtinctly into the minuteſt integrant particles of animal organization, analogy derived from the more evolved ſtructure warrants the concluſion, that every organ would be found eſſentially different in the diſpoſition, form, number, and proportion of its radical and conſtituent principles; hence it is fair to infer, that the vital power manifeſted by the property of excitability, partakes of the nature and quality of ſuch diverſity; and conſequently it is allowable to affirm that the excitability of the brain is modified by the peculiar ſtructure of that organ, the ſame may be ſaid of all the thoracic and abdominal viſcera, likewiſe of the muſcular, nervous, vaſcular, cuticular, cellular, membranous, ligamentous, and oſſific arrangements of animal matter.

Although the property of excitability in theſe diſſimilar parts varies, as effects proceeding from different cauſes, yet ſimilarity in general principle and deſign joins and aſſociates every variety, in a ſpecies of indiviſible union, for the purpoſe of conſtituting and preſerving the integrity of the ſyſtem, and maintaining the vital and ſalutary relations of its various organs

organs, hence ſimilar general laws, modified by diverſity of ſtructure, govern and conſolidate the animal frame, as a compound whole.*

If this view be correct, the notion of ſenſibility being an original and diſtinct property from the modified ſyſtematic excitability, is wholly untenable.

The property of ſenſibility reſults from a nervous modification of the general excitability, originates in the brain, and is diſtributed in ſuitable and relative diverſity of ſtructure† to every part of the ſyſtem; in like manner, the digeſtive power, by which alimentary, and probably moſt medicinal ſubſtances,‡ are decompoſed, and partly aſſimilated in the ſtomach, depends on the peculiar character of excitability, ariſing from the particular vital conſtruction of that organ. Thus excitability may, with natural propriety, be denominated from the part in which it exiſts, ſuch as cerebral, pulmonic, cardiac, diaphragmatic, ſtomachic, inteſtinal, hepatic, pancreatic, renal, &c. &c.§ An analogous unity of principle conſtitutes and governs by ſpecific adaptation, the variouſly modified phenomena of corpuſcular attraction and repulſion, the peculiar chemical affinities appertaining to the reſpective principles

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* Diversæ corporis partes, suas rite præstantes functiones characterem vitæ humanæ certum ac distinctum faciunt ut vita totum pervadit mundum, sic forma ejus conspicua vim irritabilitatis afficit.'

'*Dissertatio physiologica inauguralis de vitæ principio*,' &c.—Auct. Rob. Kinglake, 1794.

† Ich setze den specifischen unterschied der Nervenzeizbarheit in der verschiedenen structur der nerven. Es ist Thatsache, dass die nerven eine verschiedene structur haben.——'*Gesetze der Nerven reizbarbeit*,' von Koellner.

‡ Parity of reason justifies the opinion, that medicinal substances, whose radical and constituent principles often resemble those of alimentary matter, both in general texture and chemical combination, should be equally subject to the decomposing and assimilating influence of the stomach, and that effects produced on remote parts of the system by such agents taken into the stomach, result from sympathetic propagation of impression made on that organ, and not from original or direct contact. It is further consonant with the provident security universally manifested in the animal economy, to suppose, that no description of matter could find admission into the sanguiferous system, by either the pulmonic, stomachic, or cuticular route, without previously undergoing a relative assimilation in those several situations; a secreting operation probably obtains, by which a suitable decomposition and recombination are produced.

§ Thus specifically nominating excitability tends usefully to direct the attention to a distinct physiological enquiry into the causes on which the peculiar vital properties of dissimilarly organized parts essentially depend.

ciples of light, electricity, magnetiſm, and in ſhort, the univerſal efficiency of matter.*

Theſe ſeveral powers are generated by the operation of phyſical and chemical forces, ſpecifically adapted to produce thoſe peculiar effects, and which, like vital organization, cannot exiſt without their reſpective material arrangement.

The application of this principle is of the utmoſt importance to the ſtudy of every branch of phyſics, but to none more than that of phyſiology. It preſents the vital power in the character of an effect of material organization, and not as a cauſe, and thus affords an elementary clue, by which to unravel the preciſe nature of the various agents that concur in producing, amidſt an infinity of other wonderful phenomena, that moſt ſublime evolution—organic life. The agents by which the vital power is ſupplied, ſuſtained, and perpetuated, are furniſhed by the various functions allotted to the ſeveral organs of the ſyſtem; the lungs, ſtomach, brain, and cuticular ſurface, appear to be of the higheſt importance in adminiſtering to the inceſſant wants of the animal economy.

How the exerciſe of thoſe functions maintains the various phenomena of life; what is contributed by them to render the muſcular fibre contractile, and the nervous ſtructure ſentient; or in what ſtationary or variable relation the power of being impreſſed by acceſſorial agents conſiſts, is a queſtion not incommenſurate with the progreſſive elucidations of time and aſſiduity ultimately to ſolve, but at preſent involved in a degree of obſcurity widely diſproportionate to the phyſiological means yet poſſeſſed for affording it a ſatisfactory illuſtration.

The agents which form the component parts of life are objects of ſenſe, and capable of being ſcrutinized in every way neceſſary to arrive at the mode and effect of their operation.† It would undoubtedly be highly gratifying to ſcience, to learn as much of the nature and character of vital power, as the antiphlogiſtic doctrine of chemiſtry has taught of the ſeparate and combined powers of ſimple ſubſtances; to know, for example, as much of the

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* Leges, vitæ principio, in omnibus rebus corporeis, existenti, impositas, sive in fabrica menti humanæ propria, vel in vegetabilium functionibus, vel in fossilium attractione, conspiciatur, philosopho recta ratione ducto investigare licitum est. Humana scientia hisce legibus accurate observatis excolatur multum et augeatur.

'*Diss. Phy. inaug. &c. auctore.*' R. Kinglake.

† Respirable air, light, and nutritious substances, are the most efficient vital agents.

the action of vital agents, as is underſtood of combuſtion, or of reſpiration, and the generation of animal heat by the direct effect of oxygen; but were this knowledge obtained, would one ſtep be gained toward the ſolution of the reaſon of ſuch a cauſe; or would the information go further than to verify that the vital power is inſeparably connected with certain agents, is a non-entity without their operative influence, and is liable to all the intermediate imperfection occurring between its full force and final extinction? Thus much is known of corpuſcular attraction, repulſion, gravity, and chemical affinity; but why ſuch effects ſhould obtain, can only be explained by referring to that decree which impoſes on matter the general and ſpecific laws of neceſſity.

Purſuant to the view propoſed of vital power in the preceding obſervations, the moſt philoſophical definition applicable to that principle, would appear to be, that it conſiſts in a peculiar attractive and repulſive force, ſubſiſting between the particles of animal matter, generated by the concurrent operation of various phyſical and chemical* agents; that, like the principle of light or electricity, it is ſuſceptible of general diſtribution, augmentation, diminution, and ſpecific modification, by which the laws of inanimate matter are reſiſted, and occaſionally aſſimilated to its own nature, in ſhort, that it exiſts as the neceſſary effect of a vital combination of attractive and repulſive motion.

To the Editors of the Medical and Phyſical Journal.

Gentlemen,

SHOULD you think the following caſe of Hydrocephalus internus worthy of a place in your valuable periodical publication, by inſerting it in your next you will oblige,

Gentlemen,

Your very humble ſervant,

JAMES HUME SPRY,

Surgeon, Alderſgate-ſtreet.

London, July 16th 1799.

Miſs

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* Phyſical and chemical, in common with every diverſity of motive power, originate from the ſame univerſal principles of corpuſcularian attraction and repulsion, varying only in being generated by different arrangements of matter.

Much ingenious elucidation, and original application of the principles of corpuſcular attraction and repulsion, have been afforded by Mr. H. Davy's new Theory of Heat, Light, &c.

Vide '*Contributions to Phyſical and Medical Knowledge,*' collected by T. Beddoes, M. D.

Miſs Barrow, aged four years and four months, of a delicate habit of body, and fair complexion, had always from her infancy (till her late illneſs), enjoyed a good ſhare of health; having never been ſubject to thoſe complaints which are commonly attendant upon the infantile ſtate; if we except that, during dentition, ſhe had two or three convulſive fits.

About one year and a half, or two years, previous to her death, it was obſerved that ſhe was more than uſually drowſy; and that this drowſineſs came on, moſt frequently, at the ſame hour in the day: i. e. between one and two of the clock, in the afternoon, her uſual dinner-hour; it would ſometimes come on a little before that time. She came to table, in general, with an appetite; but in a ſhort ſpace of time, often in five minutes, or leſs, would ſay ſhe was ſleepy, and immediately, if not removed from the table, would lay her head down, and fall faſt aſleep. When ſhe offered to take any thing, her hands were frequently obſerved to tremble, or ſhake; and ſhe was very ſoon fatigued with walking: ſhe was likewiſe obſerved to eat leſs food than uſual. Being naturally of a volatile diſpoſition, her ſpirits were generally good; and as ſhe had never complained of being in the leaſt indiſpoſed, her periodical drowſineſs was attributed by her parents to an acquired habit; conſequently, the advice of a medical practitioner was never thought of.

About the 16th of May laſt, ſhe was ſeized with ſymptoms of a low fever; ſhe became languid, and apparently uneaſy, with a ſmall, quick, irregular pulſe, generally about 90 in the minute: ſhe now became quite indifferent to her food, and complained of being ſick with a conſiderable pain in her ſtomach, and likewiſe in her head; theſe complaints, were accompanied with coſtiveneſs. After taking ſome aperient, and febrifuge medicines, her complaints gradually receded, till ſhe was conſidered as nearly recovered.

Upon the 3d of June, in the morning, the feveriſh ſymptoms returned; ſhe became better towards noon, and was cheerful. In the evening, ſhe was ſuddenly ſeized with ſymptoms of diſordered viſion, as ſhe complained of ſeeing inſects flying before her eyes; almoſt immediately after her making this complaint, a very violent fit of convulſions came on, which threatened every moment inſtant diſſolution. Her pulſe during the paroxyſm was extremely irregular; being ſometimes ſo quick as not to be enumerated, at other times ſlow, and ſcarcely to be perceived; ſhe remained in this ſtate three hours, when ſhe gradually began to recover; but the convulſive paroxyſms with delirium, recured at intervals; which were ſucceeded by ſtupor, and frequent ſighing. She was obſerved always to be worſe at the ſame hour the drowſineſs uſually came on. At this period of the diſeaſe, her ſtools became thin, of a dark clay colour, with ſcybala, and were paſſed involuntarily

luntarily, as well as her urine; which was very high coloured, ſtaining the linen of a deep yellow: when ſenſible, ſhe complained of the pain in her ſtomach; which had gradually increaſed in violence, from the firſt attack. Her pulſe increaſed in velocity, and became more irregular, as the diſeaſe advanced. During the fits of dilirium, ſhe made frequent attempts to put her right hand to the poſterior part of the head; and ſometimes (if not prevented) would attempt to ſcratch, or tear her face. In the laſt ſtage of the diſeaſe, the ſame hand and arm were affected with a conſtant convulſive tremor, accompanied with vain efforts, to raiſe the hand to her head, which now appeared only to be affected. Near the cloſe of this diſtreſſing diſorder, her countenance underwent various, and very frequent changes; being at one time pale, at another red, and at a third of a very deep red, ſimilar to a perſon ſuffering ſtrangulation. Her eyes at this time appeared to ſtart from their orbits, with very conſiderable dilatation of their pupils: coma, with convulſions at intervals, ſucceeded to theſe ſymptoms; and death ſoon cloſed the ſcene. She died on the 16th of June.

Various medicines were exhibited, during the courſe of the diſorder, by the medical gentlemen who attended; ſuch as cathartics, febrifuges, anti-ſpaſmodics, &c., as well as bliſters; but without the ſmalleſt alleviation of the ſymptoms.

It ought to be noticed, that two children have died in the ſame family of the ſame complaint; by which it would appear, that in ſome families, there is a prediſpoſition to the diſeaſe: if this is really the caſe, every opportunity of inſpecting the bodies of thoſe children, who may be ſuppoſed to die of this dreadful malady, ought to be embraced by the practitioner; by which means, we may hope, at ſome future time, to detect its latent cauſe. But it unfortunately happens, that the prejudices of mankind are ſo great againſt any operation being performed upon the body of a diſeaſed friend or relation, as to be almoſt an effectual barrier to any purſuit, or inveſtigation of the kind, however great the advantages likely to be derived to poſterity by ſuch an examination may be; unleſs in a few ſolitary inſtances, where the ſuperior education of the parent gets the better of the bigotry of ſuperſtition, the greateſt enemy to the advancement of all true knowledge, and in no ſcience more ſo than in the ſcience of phyſic.

Diſſection.

The head was of the natural ſize; and the bones were firmly united at the ſutures. Upon removing the upper part of the cranium, leaving the cerebrum with its membranes entire, the whole felt upon preſſure uncommonly tenſe: removing the dura mater in part, leaving the falx, with the longitudinal

dinal sinuses, the vessels of the pia mater appeared through the tunica arachnoides, more distended with blood than usual: the longitudinal sinus was empty, probably from its position: the transverse lateral sinuses were much loaded with blood: upon making an incision into the ventricle of the right hemisphere of the brain; from six, to seven ounces of pellucid fluid rushed out with considerable force: the plexus choroides in each ventricle, was of a whitish colour: no other morbid appearance was observed; excepting, that the pineal gland was much more flabby than usual.

To the Conductors of the Medical and Physical Journal.

Gentlemen,

As the discussion is not finally closed, relative to the expediency of introducing the cow-pox into general practice, as a substitute for the small-pox, I shall make no apology for transmitting to you the following cases:—

It is a little extraordinary, that the first patient whom I inoculated for the cow-pox, had a confluent eruption; and though the symptoms were milder than I ever remember having seen them in the confluent small-pox, she was in so much danger, as to make me very anxious about her from the 12th to the 21st day.

During the continuance of the eruptive fever, she found relief from being carried out, and attended at the Infirmary, on my out-patient days, till the 1st of May (the 15th day from the time she was inoculated, and the 4th day of the eruption), when the soreness and debility became too considerable to allow a continuance of the exercise. She then began to take opiates and acids, the salutary effects of which (especially of the opiates, repeated morning and evening), were very evident. Laxatives were occasionally necessary, and the cerat. litharg. acetat. was applied for a few days towards the close of the disorder, to those parts where the discharge was considerable, to prevent her cloaths from adhering.

The same vaccine matter was made use of in the first nine cases: the other five patients were inoculated with matter taken from Martha Mead.

Manchester, *July* 12, 1799

M. WARD.

First Case.

April 16, 1799. Martha Mead, aged seven years. Fourth day. The punctures are considerably inflamed; the superior one discharges a little matter. Eighth day, there is less efflorescence round the punctures than on the fourth

fourth day. Thirteenth day, the ſuperior puncture is healed, the inferior one has the appearance of an oblong veſicle, and contains a limpid fluid; it is more elevated than on the 8th day; there is alſo a greater degree of efflorescence. She began to be feveriſh yeſterday morning, and continued ſo all day; had a reſtleſs night, and was delirious; but walked to the Infirmary this morning, and is relieved by being out; her breath is offenſive, tongue white, appetite bad, and her eyes look dull and heavy. Fifteenth day, ſhe ſlept tolerably the laſt night, vomited three times the night before, and was very ill yeſterday till noon, when ſome ſpots were obſerved on her face, which relieved her. Towards evening a great number of puſtules appeared on her neck, breaſt, and arms; and this morning there is a plentiful crop on every part of her body. Her arm is more inflamed than on the thirteenth day; her tongue is white and foul; thirſt great; her appetite bad; but ſhe ſlept better laſt night than ſhe has done ſince the eruptive fever attacked her.

Sixteenth day. She has had a reſtleſs night, and complains of her throat being ſore. Several puſtules are viſible on the tonſils and mucous membrane of the throat; in other reſpects ſhe is much the ſame as yeſterday The eruption is now confluent in ſome places on her face and arms.

Seventeenth day. She ſlept well, and is not ſo feveriſh; but ſhe is rather hoarſe, and very dull, and complains of general ſoreneſs.

Eighteenth day. She has ſlept well; is very weak; throat ſore.

Nineteenth day. She has not had a good night; her tongue is foul and very ſore; there are ſeveral puſtules upon it; throat ſomewhat better; her eye-lids are much ſwelled, and nearly cloſed; the puſtules become more confluent daily; ſhe is very unwilling to be moved.

Twentieth day. The patient has had a reſtleſs night, and complains heavily of the ſoreneſs; her throat is better; her eye-lids are cloſed; the puſtules continue to run more into each other; maturation ſeems nearly complete every where but on the legs and feet; the inoculated arm is painful from the ſhoulder to the elbow; it is much loaded with puſtules; the puncture is covered with a ſmall dry ſcab.

Twenty-firſt day. She has been reſtleſs, but is better this morning; her throat is well, and the hoarſeneſs gone; the ſoreneſs is ſo great that ſhe moans and cries continually, except when quieted by opiates.

Twenty-ſecond day. She has ſlept well and is much better; ſhe can open her eyes with eaſe. Many of the puſtules have dropped off from her face ſince yeſterday, and have left the ſkin of a deep red colour, but not pitted.

The

The child has complained feveral days of pain in her left knee, a clufter of puftules having joined fo as to form one very large one. It broke laft night and fhe is eafier.

Twenty-third day. She has flept well, and makes no complaint, except of forenefs on the bottoms of her feet, which prevent her from walking. It is furprifing with what rapidity the puftules fall off from her breaft and neck, leaving only a rednefs and a roughnefs on the fkin.

Twenty-fourth day. She is going on well in every refpect. The puftules continue to exfoliate rapidly.

Twenty-fixth day. She has had an uneafy night; there is a confiderable difcharge from the puftules on her fides, back, and belly.

Twenty-eighth day. Has refted well the two laft nights, but is very tedious and uneafy to day; fhe complains that "her cloaths ftick to her body like bird-lime."

Thirty-fifth day. Her health is reftored.

July 4. She was inoculated with variolous matter.

July 11. She has not taken the infection.

I have only to add to the above ftatement, that the eruptive fever was not fo ftrongly marked by debility, as it ufually is in the confluent fmall-pox: the fecondary fever was fo trifling as to be fcarcely worth mentioning; the progrefs of the puftules to maturation, as well as their fubfequent feparation, was more rapid, the feparation was alfo more complete, *and the exhalations were all along free from any unpleafant odour*. As nearly as I could afcertain, fhe had not fewer than from 1600 to 1800 puftules.

Though fhe lives in a populous part of the town, I have reafon to believe the difeafe has not been communicated from her to any other perfon in the neighbourhood, having taken fome pains to gain information on this point.

Second Cafe.

April 16, 1799. William Mead, aged nine months. He was attacked with feverifh fymptoms on the eighth day, at which time fome elevation of the punctures, accompanied by fome degree of efflorefcence, had taken place. Thefe appearances decreafed from that time to the eleventh day, when they were quite gone, and on the fifteenth day one of the punctures was healed, and the other was covered with a fmall dry cruft. The child continued well from the eleventh to the thirty-fecond day. A flight ulceration began to take place under the fcab on the twenty-firft day, which gradually

dually increafed to the fize of a filver three-pence, but it was fo fuperficial, I did not think it neceffary to apply any thing; a little ichor was difcharged from the place from this time to the thirty-fecond day, when he became feverifh, and continued very reftlefs and tedious three or four days. On the thirty-third, thirty-fourth, and thirty-fifth days, about fifty puftules appeared, moft of which were on his face. The difcharge ceafed, and his arm got well, foon after the fever abated.

I was unable to account for the fever coming on fo late as the thirty-fecond day (and it feemed a ftrong argument againft introducing the cow-pox into general practice) till I had read Dr. Jenner's fecond publication on the *Variolæ Vaccinæ*. He there attributes this circumftance, in fome inftances which he has met with, to the fecondary effects of the virus, and fays he is able to prevent them, by applying efcharotics to the part affected.

July 4. I inoculated him with variolous matter.

July 11. The punctures are healed.

Third Cafe.

April 16, 1799. Sarah Gray, aged five months, was inoculated.

April 23. She was inoculated again, the matter inferted on the 16th having produced no effect. Fourth day:—She has not taken the infection; variolous matter was inferted. Eighth day:—The eruptive fever has taken place. Twelfth day:—She has a fine, diftinct fort.

Fourth and Fifth Cafes.

April 16, 1799. Ann Morley, aged five years, and Mary Ann Morley, aged nine months. Eighth day:—They have not either of them taken the infection, and were therefore inoculated a fecond time, and with the fame event. April 30:—They were inoculated with variolous matter, but without fuccefs, and they were inoculated again with variolous matter on the 5th of May. Eighth day:—The punctures are a little elevated and inflamed. Seventeenth day:—The children have not been indifpofed fince the laft inoculation, nor have any puftules appeared on either of them. The mother is certain they have not had the fmall-pox, and they were in every refpect healthy each time of their being inoculated.

Sixth Cafe.

April 16, 1799. George Wood, aged three years, was inoculated with vaccine matter, and afterwards with variolous matter, but without effect in both inftances; but it muft be obferved, he had been inoculated four months before, and that his arm was inflamed at that time: a trifling indifpofition alfo took place, but no puftules appeared.

Seventh Case.

April 19, 1799. THOMAS COOP, aged five months. April 23:—He was inoculated again, the first inoculation having failed. April 26:—The punctures are healed. He was inoculated with variolous matter. Eighth day:—The inflammation on his arm is pretty considerable. Fifteenth day:—The child has not been indisposed, nor had any pustules. His arm is well.

Eighth Case.

April 19, 1799. SAMUEL BARNES, aged sixteen months. April 23:—Not having taken the infection, he was inoculated again. Eighth day:—There appears about as much inflammation round the incisions as usually takes place on the third or fourth day, when infection has been produced by variolous matter. He has been hot and feverish since the fifth day, owing to his teeth, as his mother supposes, and this opinion is strengthened by the state of the arm. Eleventh day:—There is a good deal of efflorescence round the punctures; he was restless last night, and is tedious and hot to-day. Eighteenth day:—He is very well and has not had any pustules. Twenty-ninth day:—I inoculated him with variolous matter in both arms; but no disease ensued.

Ninth Case.

April 23, 1799. JAMES HOPWOOD, aged nineteen weeks. The punctures being healed on the 26th, he was inoculated again with vaccine matter. Fifth day:—His arm is inflamed from the vaccine matter inserted four days since. He was feverish yesterday, but is better to-day. His mother thinks he is about his teeth, but his gums are not swelled. Eighth day. The inflammation advances on his arm; he looks pale, and is hot and restless. Twelfth day:—No complaint; the punctures are healed; he has not had any pustules, except a few on the inoculated arm, close to the incisions. I this day inoculated him with variolous matter. Nineteenth day:—He has taken the infection. Twenty-second day. He has a mild disease, and thirty pustules.

Tenth Case.

April 30, 1799. JOHN LUNT, aged fourteen weeks. He took the infection, and sickened on the seventh day. He began to break out on the tenth, and was pretty full of pustules on the twelfth, but the eruption was distinct. There was an unusual number of white pustules, as well as a great degree of efflorescence round the punctures, on the eleventh day; and the pustules being placed at regular distances from each other, the arm assumed a studded appearance. He continued to be more or less feverish from the seventh day to the eighteenth, and was uncommonly tedious; indeed he was seldom

ſeldom quiet during that time, except when he was under the influence of tincture of opium, or when he was carried out. On the laſt mentioned day his eye-lids were ſwelled and inflamed ; theſe appearances continued ſeveral days. A hoarſeneſs came on the eleventh day, and did not leave him till the eighteenth. On the twenty-ſecond day, however, his health was completely reſtored, and on the twenty-fourth he was inoculated with variolous matter, but without effect.

Eleventh Caſe.

William Bullock, aged nine months. He took the infection, and broke out on the tenth, eleventh, and twelfth days, and had about ſixty puſtules, beſides a great number in the neighbourhood of the punctures ; he was poorly three days before they came out, and one after. He was ſubſequently inoculated with variolous matter, but without effect.

Twelfth Caſe.

Robert Foley, aged ſix months. As he did not take the infection, I inoculated him again in ten days, but his mother neglected to bring him in and I have not heard of him ſince.

Thirteenth and Fourteenth Caſes.

Henry Delmore, aged three years, and Elizabeth Delmore, aged ſix months. Their place of reſidence was not noted, and I have not heard of them ſince.

The great queſtion relative to the cow-pox, ſeems now to be brought within a narrow compaſs.

We have the authority of a phyſician whoſe experience in the inoculated cow-pox is very extenſive, for aſſerting, that thoſe perſons who have had this diſeaſe by inoculation, are thereby ſecured from having the ſmall-pox.*

The ſame gentleman has lately found, that the inoculated cow-pox is ſeldom accompanied by puſtules, if the virus be taken from thoſe perſons who have had the diſeaſe in its mildeſt form †.

Conſidering the above obſervations as eſtabliſhed facts, and ſhould it alſo appear, that the cow-pox is not ſo liable to be propagated by contagion, as the ſmall-pox ; may we not indulge a hope, that the æra is probably not far diſtant, when we ſhall be able to congratulate mankind at large, on their having a fair proſpect of being exempted, at no very remote period, from that moſt deſtructive malady.

To

* See "Woodville's Cases and Remarks on the Cow-pox."

† See the "Medical and Physical Journal for July, No. V."

To the Conductors of the Medical and Physical Journal.

GENTLEMEN,

AS I have been requested for a statement of an *asthmatic case* that came under my care some time ago, I have referred to my memorandums respecting it; and as I have stated the particulars of it, if you think the perusal of them may prove agreeable to any of the readers of your valuable publication, I submit them to your disposal.

I am, respectfully,
Your most humble Servant,
W. BACHE.

BIRMINGHAM,
July 15th, 1799.

Mr. PARKER, an attorney of eminence and respectability in Birmingham, when I was first called to him had been for several years severely afflicted by asthma, that reduced him to a state of extreme weakness and emaciation. He had previously subjected himself to the medical advice of several physicians of well-established reputation, and had at times received some temporary relief.

Several weeks before I saw him, he had been removed from his house in town to a fine dry spot, about a mile distant from Birmingham, for the benefit of the air, but had not experienced any sensible advantage from the change of situation; and several of his friends and acquaintance freely declared to me, that they thought the violence of his complaint was such, as must necessarily terminate his existence in a few days.

Upon enquiry, I found he had experienced a considerable degree of dyspepsia, and that it had attended him almost constantly for several years, but the period of its origin was not within the compass of his recollection. I could not discover any inflammatory affection in the system, either general or local; slight spasmodic and convulsive ones had frequently exerted an influence upon various parts of the body. His sleep also was frequently broken, and much disturbed by unpleasant dreams. He was remarkably subject to changes, both in his sensations and animal spirits, from the vicissitudes of the atmosphere.

His saliva was remarkably frothy, and his expectoration extremely viscid. The alvine fæces oft-times assumed the appearance of yeast in a state of effervescence. The urine was in common of a natural colour; when it had stood a few hours an eneorema generally appeared in it, and *its surface seemed as if covered with dust*. Being struck by this uncommon appearance, to ascertain its nature, I bent a strip of writing paper about three inches long

long, and half that width, in its middle (to a right angle), I then laid one of its square surfaces flat upon the surfaces of the urine in the glass, and upon raising it perpendicularly, found the matter attached to it; I dried it gently, and then subjected it to examination by the microscope, which convinced me that what I had mistaken for dust were saline crystals, but I was unable to collect a sufficiency of them for any chemical experiment.

When I poured a small quantity of very transparent lime-water into Mr. Parker's urine, the lime contained in it was always precipitated by it with more celerity, than when I applied the same calcarious solution, in like manner and proportion, to my own.

The matter he perspired generally smelt sour; and when pieces of bibulous paper were previously stained by a solution of litmus, and then applied to various parts of the body, the exudation from each produced the effect of a weak acid upon the colour; and when the paper was made dry, and the edge of it applied to the flame of a candle, I found it a weak touch-paper, but when I dissolved about a grain or two of vegetable alkali, in a small wine-glass of water, immersed the paper in that, and dried it a second time, I always found that its property as a touch-paper was greatly augmented.

From these observations I became convinced, that an acid pervaded the whole of the circulating system, and I presumed that it existed in a morbid degree, either as to quantity or strength, and was the exciting cause of the spasmodic affections observable in the lungs, and other membranous parts, to which it might occasionally be applied, probably sometimes in a gaseous state, and at others in a more dense and concentrated one, and perhaps variously combined. The indications of cure suggested to my mind, were to restrain its influence, by the application of alkalies, cretaceous and absorbent earths; my choice of each was governed by the existing circumstances, at the time when each was prescribed, and my attention was principally directed to the state of the stomach, the bowels, the expectorations, the kidneys and the skin.

Gum guaiac. bitters, aromatics, and essential oils, I ordered occasionally, as I wished an increased, or otherwise diversified action in different parts of the system; and when an augmentation of spasmodic affections took place, or coma, vigil, or dryness of the skin, I had occasional resource both to opium and camphor, which were not only internally, but externally applied, combined with solutions of volatile alkali.

These were the whole of the medical means I employed; but as I believe

believe that the neglect of proper attention to prophylactics, and improprieties in cloathing, are the primary cause and chief support of the majority of chronic complaints, to prevent a relapse previous to a confirmed state of the functions of his stomach, &c. I thought proper to recommend a close attention to articles of diet, moderately warm cloathing, and rather sparing meals. The importance of proper mastication I also endeavoured to point out, and seriously urged an attention to it. Animal food I desired might be his principal subsistence. I was much pleased to find every particular of diet was cautiously attended to, as a complete cure was finally accomplished, and it has continued to the present time.

Cursory Observations on the Importance of anatomical Knowledge in the Treatment of Diseases, with Remarks on two Cases of Hydrocephalus internus.—By CHARLES BROWN, *Surgeon, Member of the Corporation of Surgeons of London.*

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

MEDICAL and chirurgical practitioners, from the time of HIPPOCRATES to the present day, have ever considered the study of anatomy, as forming one of the most essential branches of their education, and without which, they were not qualified to practise the *ars medendi*. Independent of its being one of the most entertaining, it is also the most useful part of natural philosophy. It expands our ideas, opens the understanding, and tends strongly to erase prejudice from the mind.

The zeal with which it is now cultivated, the large sums of money which have been expended in anatomical museums, and the priority and boldness which a surgeon, skilled in anatomy, assumes in the performance of any capital operation, are convincing proofs of its great utility.

One of the most able anatomists and physiologists of the present day (Mr. JOHN BELL), and one whose writings bear sufficient proof of this assertion, observes, "that a consciousness of the high value of anatomical knowledge never entirely leaves the mind of the student."

We are indebted to the illustrious MORGAGNI for his valuable work, "*De causis et sedibus morborum*," a work abounding with many excellent practical remarks, but more so for that part which more immediately relates to, and is connected with *morbid anatomy*. Doctor BAILIE has also added a rich

a rich ſtore to our anatomical knowledge, by the publication of his invaluable work, entitled, "*The morbid Anatomy of ſome of the moſt important parts of the Human Body.*" The number of valuable caſes to be found in ſome of our periodical publications, have alſo aſſiſted the ſtudent in his inquiries after diſeaſed appearances. Having premiſed theſe few obſervations on the importance of cultivating this branch of ſcience, I would at the ſame time inſiſt on the propriety of every medical man, uſing his utmoſt exertions in overcoming the ſuperſtition and prejudice which attach to the minds of ſome perſons, who contumaciouſly refuſe the bodies of their deceaſed friends being examined, although it were to lead to ſome great improvement in the practice of phyſic.

I purpoſe therefore, from time to time, relating with the utmoſt exactneſs, any morbid appearances, which I can obtain leave to examine in my own practice, or that of other gentlemen, and accompanying thoſe remarks with further obſervations on the practice purſued in the treatment of ſuch diſeaſes which lead to the inveſtigation.

I have the honour to be
Your's obliged,

No. 25, Hatton-Garden. CHARLES BROWN.

Two Caſes of Hydrocephalus internus, with practical Remarks.

It is the opinion of all enlightened philoſophers of the preſent day, that in order to get at truth, and accumulate uſeful facts (which, particularly in medicine, are indiſputably much wanted), we ought to ſuſpect our own pre-conceived opinions, to diveſt ourſelves as much as may be of our prejudices, and make uſe of the greateſt impartiality in judging. If we look around us, we muſt obſerve, even among our moſt intimate friends, how greatly they are biaſſed to the ideas which have been engrafted on their underſtanding, by education and cuſtom; notwithſtanding ſome of them may involve the greateſt abſurdities:—Thus we find, for inſtance, many of the wives of the Indian kings are brought to believe, that by ſelf-murder (a crime which we think the greateſt and moſt contrary to nature) they ſhall inherit the greateſt bliſs.—Under this perſuaſion, many throw themſelves into the funeral pile with their dead huſbands, encouraged and animated to it, by thoſe who are believed to be the beſt and wiſeſt of their people. We may alſo obſerve, that a perſon educated in Italy will be a Catholic; in England, a Proteſtant; in Turkey, a Mahometan; in India, a Gentoo:—Errors from the ſame cauſe reign in philoſophy, as well as divinity and medicine; our philoſophical opinions are generally formed in the ſame manner, by education, and the company

company we keep; and often under the protection of some great name, whose notions few dare to oppose, or even to investigate and examine:—thus the earth, moon, and planets, were believed to circulate round the sun, by the ancients down to PYTHAGORAS. After that, the *Ptolemean* system took place, then the *Tychonic*, and now the ancient system is again recovered by COPERNICUS and his followers, and demonstrated to be true by the immortal NEWTON, and now universally believed.

The foregoing observations shew us how easily we are induced to believe false opinions by education, and with what difficulty they are eradicated afterwards.

I have been led to preface the following cases with these remarks, with a view of drawing the attention of my readers to a disease of very considerable importance, and which seldom yields to those remedies usually employed.

There are some diseases, says an elegant writer, "whose symptoms are so obscure, or so similar to those of other diseases, as to prevent us from forming a certain diagnostic, till death ensues, and dissection ascertains the cause." Of this number we may include *hydrocephalus internus*; for although this fatal complaint is accurately described by late writers, yet there are few of the symptoms attending it, as pathognomonic, but may arise from very different causes: as pressure upon the brain, from various causes, dentition, and even from worms in the intestinal canal, according to the authority of medical writers. In a late publication,* I have endeavoured to lay down the distinguishing characteristic between this disease and others which are ushered in with the same symptoms; but most disorders of children are, more or less, accompanied with anomalous appearances, particularly as to the state of the pupils, heaviness about the eyes, picking of the nose, and inactivity. In regard to the use of mercury in this disease, little dependence is to be placed upon it, nor is it ever exhibited in private practice, without being conjoined with opium, and very frequently the fol. digit. pur. Blisters are generally applied at the time the patient is under the mercurial course, as also leeches, electricity, and other topical remedies; so that we can never be accurate in our commendation of any remedy which is employed in conjunction with others equally active, and possessing similar virtues. The two following cases occurred nearly within a few days of each other; the first was treated with mercurials, in consultation with an apothecary in my neighbourhood, and died; the other I had

* BROWN on Scrophulous Diseases, octavo.

I had the ſole charge of myſelf, was treated in a contrary way, and recovered.

Case I. S. D. a child two years old, was attacked, June 5, 1799, with ſymptoms of hydrocephalus. The firſt ſuſpicion of diſeaſe was indicated by great ſtupor, pain in the head, a diſtortion of the eyes, and a pulſe beating 160 ſtrokes in a minute. The child had long been troubled with worms, for which a patent vermifuge had been exhibited without ſucceſs. The gentleman who firſt attended preſcribed calomel and rhubarb, in ſmall doſes; but on the 12th, the pupils of the eyes became dilated, and inſenſible of light. *Strabiſmus* ſucceeded, and in the evening there were evident ſymptoms of apparent diſſolution. Upon being called in, I ordered the head to be ſhaved, and bliſters to be applied in the direction of the ſutures. The following medicines were preſcribed:

℞ Hydrargyr. muriat. mitis, gr. i. Opii. crud. pulv. gr. ſs. Cretæ præp. gr. iij. M. fiat pulvis horá ſomni exhibendus, et quartis horis repetendus.

Inung. nucha unguent. hydrarg. ſcrup. ij. bis quotidie.

June 13. The calomel has not proved purgative, and the patient ſlept laſt night, but was frequently troubled with convulſive motions of the arms and eyes, and toſſes the head from one ſide to the other on the pillow. The pupils continue in the ſame ſtate. Pulſe 120.

Applicentur hirud. duæ, capiti.

Perſiſtat in uſû medicam. ut heri præſcript.

June 14. Reſtleſs all night, vomited twice. Pulſe this morning 122. Had two ſtools; very feveriſh; frequently ſcreams out, as if in great pain; the pupils not ſo much enlarged. At nine o'clock this evening the muſcles of the lower jaw were convulſed, the patient became very reſtleſs, and died apparently in great agony at twelve o'clock.

The next morning I opened the head, and diſcovered the lateral ventricles filled with water. The *cerebrum* was largely diſtended, in conſequence of the *ſeptum lucidum* having been ruptured, the two ventricles having then a free communication. One very remarkable circumſtance ſhewed itſelf in this caſe, which was that the *infundibulum* was hollow, and filled with a diaphanous fluid. This is worthy of remark, as anatomiſts in general deny this being the caſe, although ſome late experiments on this part of the brain * by Profeſſor Murray, of Upſal, clearly prove it to be a medullary canal,

* Diſp. de infundibulo cerebri.

canal, surrounded by a lamina of the *pia mater.* He froze the brain, and found the canal leading to the *glandula pituitaria* filled with ice. De Haen * tells us, he found it dilated, and filled with a calcareous matter.

Case II. The patient was eighteen months old, and of a strumous habit, and had all the usual symptoms of the disease. I applied leeches to the temples, blisters to the head and nape of the neck; gave the fol. digit and calx zinci combined; when comatose, stimulated with sal. c. c. vol & æther: with a small electrifying machine, I passed a few shocks twice a day through the head. Gave opium to the amount of three grains each night *ad tres vices.* In nine days he was quite recovered. Hydrocephalus is evidently a disease of debility, and requires remedies which increase the excitability of the system. On a future occasion, I shall continue my remarks on this disorder.

July 5, 1799.

Analysis of the Memoirs of the Medical Society of London.

[Continued from our last Number, pp. 29---35.]

Art. XX. contains "*Cases of Cynanche Trachealis, successfully treated, with Observations on that disease,*" By H. Field, Apothecary, Sec. M. S.

The treatment of these cases is by venesection, leeches, blisters to the sternum, antimonial emetics, laxatives when necessary, and an embrocation to the throat, by means of linen cloths, constantly wetted with

℞ Aq. ammon. acet. unc. ij.—Spir. æther. vitr. comp. unc. j. M.

After the account of four cases, and the successful treatment, Mr. Field adds,

"Previously to entering upon those practical observations which are designed to accompany these cases, it will not, I trust, be deemed totally uninteresting, to premise a few remarks on the different kinds of disease which have been known under the general name of croup, and also on the nature of the malady as to contagion.

"It has been stated by authors, that there are two kinds of this disease, the one spasmodic, and the other inflammatory. Of the propriety of this distinction I am at present well satisfied, and am only concerned, that two diseases, so extremely different in their causes, and consequently in their mode of treatment, should be confounded under one and the same title; a circumstance which has an evident tendency to mislead the practitioner, and which has undoubtedly been the reason why we find such very opposite modes

* Ratio Medend. tom. vi. p. 271.

modes of cure recommended by different writers, and each with a confidence derived from some degree of experience.

"That the symptoms of the two diseases bear considerable resemblance, will readily be allowed; nevertheless, there are evidences of difference, I think, sufficiently strong to enable an attentive person to discriminate them. These marks of distinction I shall endeavour now to describe, and to give them the greater effect, shall contrast the one with the other.

"The spasmodic croup always attacks suddenly, and usually in the night. The attack of the inflammatory croup is sometimes equally sudden, but more generally gradual, being preceded a few days by slight feverish symptoms, and a teasing, short cough, not however, sufficiently important to create the smallest uneasiness in the friends of the patient. The spasmodic croup often intermits; and in these intervals, both the respiration and the cough, if any exists, are free from its usual characteristic sound: the inflammatory, on the contrary, when once completely formed, never intermits so as entirely to lose its distinguishing mark, particularly in coughing; add to which, the heat, frequency of pulse, and other symptoms of *pyrexia*, are found in the latter in much greater degree than in the former. Dr. Rush * has mentioned several other marks of difference, but as they apply chiefly to the effect of remedies, and to the later stages of the disease, it is not judged necessary to insist upon them here, it being in the first attack of this malady, that a due discrimination becomes so extremely important; that being the time in which the application of powerful and decisive remedies is most conducive to the relief of the afflicted, a delay of a few hours being frequently the cause of irreparable injury.

"Every author that I am at present acquainted with, has denied this disease to be of an infectious nature. In a former † paper on this subject, I have taken the liberty to suggest my doubts as to this opinion being well founded, for which I have there assigned reasons; since that time, my particular attention has been given to that point, and I am sorry to add, that increased experience has tended to confirm me more strongly in the opinion, that the true *cynanche trachealis* is a contagious disease. I have since met with repeated instances of its occurring in the same family, and that after such an interval as we most usually find contagious diseases to require in order to produce their morbid effects, namely, from six to ten days: whether the above opinion be well or ill founded, I would strongly recommend to practitioners to avoid the danger of communication, by requesting that every child may be removed, if possible, from the same house; or, at all events, be prevented entering or coming near to the sickchamber.

"It has been said that this disease has occasionally been met with in adults; when this has been the case, I am very much disposed to think, that it was not the

* Vide "Medical Inquiries," by B. Rush, M. D. vol. i. p. 141.
† Vide "Memoirs of the Medical Society of London," vol. iv. p. 151.

the inflammatory, but the spasmodic croup; in confirmation of which opinion, I have never heard of its having proved fatal to them.

"The first and most important curative indication in the treatment of the true or inflammatory croup (for to this our present observations will be confined) is, to diminish the quantity of blood. In the paper on this disease, which the Society have done me the honour to publish in their Memoirs, I gave a caution against the use of the lancet, from an apprehension that the early debility, which had been observed to come on, would render general bleeding an unsafe and improper practice, and that our evacuation of blood should be only topical, by means of leeches; which, however, was advised to be freely and vigorously pursued. Since that time I have had opportunities of observing, that the lancet may not only be safely, but even advantageously employed, and that it should never therefore be omitted, when medical advice is required in the earlier stages of the disease, from two to four or five ounces of blood being taken away, according to the age and strength of the patient; much caution is nevertheless requisite in repeating this operation. If any abatement of symptoms takes place after the first bleeding, which frequently happens, I should certainly think it unnecessary to repeat that evacuation; but if an evident exacerbation should afterwards come on, it will be generally proper to do so: in this case a topical discharge, by means of leeches, appears to me much to be preferred to a general one. Allow me here to give a caution relative to the prognosis in this disease. The means now recommended in the early stage of it, being frequently followed by a considerable and very flattering appearance of recovery, the practitioner may be so far deceived as to be encouraged himself, and, in consequence, to encourage the friends of the patient, with great expectation of a favourable issue; but in this he cannot be too much on his guard, nor should he consider the danger to be past, until three or four days have elapsed without a return of symptoms, by which time the patient will have made considerable progress towards recovery.

"Our next subject will be an inquiry into the use of blistering in the cure of this disease. I have, on a former occasion *, taken notice of Dr. HOME's objection to the early application of blisters to the affected parts, as liable to do injury by their immediate stimulus. I am well satisfied, from later observations, that this objection is well founded, although sufficient attention does not seem in general to have been given to it; and whoever considers the extreme vicinity of the diseased part the external surface of the throat, must surely coincide with me in opinion, that the application of a blister immediately to the part must act as a local stimulus, and therefore must increase, rather than diminish inflammation. Vesicatories should, for these reasons, be either entirely omitted, or else applied only to distant parts. Whether they will in the latter case be of any service, I am at present unable to ascertain. Blisters were applied in only two

* Vide "Med. Soc. Memoirs," vol. iv. p. 159.

two of the present cases, and in those there is not the smallest reason to suppose, that they contributed in any degree to the cure; in the last of the two, the blister scarcely took any sensible effect on the skin.

"The situation of the trachea with respect to the external integuments, which I have above alluded to, suggested to me an idea that refrigerating, and also sedative remedies, might be used externally with advantage. In the third and fourth cases now recited, I made trial of an embrocation with that intention; how far the success of those cases is to be attributed to this remedy, it is impossible to say; it is sufficient, however, to enable me to recommend this and similar applications to further trial, and also emollient and sedative cataplasms and fomentations. The occasional use of emetics, so as to produce their full effect, and their constant use so as to excite nausea, as far as has hitherto appeared, seems to be attended with good consequences. The body should be kept at all times in a soluble state, but any considerable evacuation by stool is better avoided, its immediate tendency being to debilitate, without apparent advantage, in relieving the patient. The warm bath, either partial or general, may be employed with probability of benefit."

ART. XXVII. Presents us with some very interesting and new "*Observations on human intestinal Worms; being an attempt to their arrangement into Classes, Genera, and Species.*" By R. HOOPER, M. D.

As this article is illustrated by beautiful plates which we cannot command, we must content ourselves with presenting our readers with the result of Dr. Hooper's classification, referring to the Memoirs themselves for the synonyms, anatomy, &c.

Worms found in the human stomach and intestines he divides into two classes, viz. into,

I. Those worms, which are generated and nourished in the human intestinal canal, and which there propagate their species; and,

II. Those insects or worms, that accidentally enter the human primæ viæ *ab extra*; such are, several species of scarabæi, the lumbricus terrestris, the fasciola, the gordius intestinalis, and others. This second class belongs to the province of natural history, and is therefore omitted by Dr. Hooper.

The first class is divided into *two orders*, viz.

Order I. ROUND WORMS.

Genus 1. *Ascaris.*

Species 1. Ascaris *lumbricoides.* The long round worm.

2. —— *vermicularis.* The thread-worm.

Genus

Genus 2. *Trichuris.*

Species 1. Trichuris *vulgaris.* The long thread-worm.

Order II. Flat Worms.

Genus 1, *Tape worms.*

Species 1. *Tænia osculis marginalibus.* The long tape-worm.

2. ——— *superficialibus.* The broad tape-worm.

This volume contains a collection of most interesting papers, and histories of particular cases of disease; but whenever we make any extracts from the few select works which we profess to analyze, we endeavour to confine ourselves as much as possible, to improvements in the *practice* of medicine and pharmacy.

To the Editors of the Medical and Physical Journal.

Gentlemen,

A very sensible letter appeared in the fourth Number of the Medical and Physical Journal, page 337, on the subject of Quackery. It is much to be wished, that some such regulations as are therein suggested, might be adopted to suppress the baneful compositions of the ignorant and daring self-created doctors, or at least to prevent their so very general circulation and use.

There is, I fear, little reason to expect that the College of Physicians, whatever powers they are possessed of, will interest themselves in the affair; but without their assistance, much may be effected by the profession at large, if they will only consent to oppose the quacks with their own weapons.

It is evident, that the only way a quack-medicine gets very celebrated, is, by its being constantly puffed off in advertisements. Whenever a cure has been performed, or supposed to have been performed by any of these compositions, thousands of advertisements are distributed in all possible ways, to make it universally known and attended to; but not a word is whispered, not a syllable dropt, of the thousands who, having credulously swallowed these incongruous remedies, have found the relief *they* could not give, in the grave, or have continued to exist miserably, in a state worse than death! Why are not these cases made public? What should hinder professional men, who are daily witnessing the mischiefs occasioned by these noxious drugs, from publishing them to the world? The expence, I conceive, might

might easily be defrayed by subscription (which I have little doubt would be soon filled up), and it is to be hoped, that in these cases, truth would not be esteemed a libel *.

In addition to this, it would be proper to endeavour by occasional addresses in the public papers, to convince the respectable persons, who are sometimes prevailed upon to attest cures, said to be performed by these medicines, of the injuries they may occasion by such injudicious conduct, though their motives are undeniably praise-worthy; for though they may believe that the remedies recommended, are very proper in cases similar to those, in which they have experienced good effects, yet as sick persons and their friends are very frequently, and very woefully mistaken, in their opinions of diseases, the use of medicines thus recommended, may be attended with fatal effects.

The names of dignitaries in the church and law have, for some months, been pompously exhibited upon all the posts and dirty walls of the metropolis, as recommenders of some newly-broached worm-medicines; but surely, these great and estimable characters would never have so publicly sanctioned these remedies, however useful they may prove as anthelmintics, were they aware, that children are often suspected to have worms where none exist, and that under such circumstances, these medicines may do infinite mischief; of which the following is an instance:

A few months ago, a child about three years of age, was suspected by his parents to have worms; without ascertaining this, they determined to give the medicines thus trumpeted forth as inestimable by the Proprietor, and sanctioned by such high names. The first dose, given according to the printed directions, made the child very ill; not discouraged, however, they gave a second and third, and then the patient was so alarmingly worse, as made his friends desirous of regular advice. The physician who had on former occasions attended the family, was called in, and found the child languid and weak, the pulse quick and low, the lips pale, appetite gone, breath offensive, breathing short, frequent, and profuse, hæmorrhage from the nose, and small purple spots appearing on all parts of the body. This excessive state of debility appeared to have been produced by the injudicious exhibition of these powerfully drastic purgatives, to a child who was ill in consequence of long-continued cold, damp weather, and poor diet. Had this child, instead of being treated for worms (in which case these medicines

* Some correspondent may, perhaps, give proper information on this subject, as it is understood, that Dr. LETTSOM, who so spiritedly pointed out the injurious effects of a late Quack's nostrums, was prosecuted for a libel, and obliged to pay damages.

cines would have been much too rough for him), taken ſome light cordials, joined with gentle purgative phyſic, and been ſupplied with proper diet, he might, probably, have been now alive; as it was, though partially recovered by proper means from the ſtate above deſcribed, he gradually ſunk into an atrophy, and died completely exhauſted.

Societies are forming almoſt every day for various beneficial purpoſes; let one, then, equally beneficial, be formed for the purpoſe of convincing the public of the dangerous conſequences of quackery. To this end, let well-atteſted caſes be publiſhed of the injuries produced by the uſe of theſe unknown remedies; no unfair means ſhould be uſed, but every well-authenticated failure ſhould be fairly and unequivocally ſubmitted to the public.

If the public are in this manner put upon their guard, it is to be imagined that laws and regulations to reſtrain quacks will be leſs neceſſary; ſomething effectual, however, in that way, ſhould be attempted, and a ſociety inſtituted for the aforementioned purpoſe, would probably ſoon be able to furniſh a plan effectual for this.

July 12, 1799. S. M.

To the Editors of the Medical and Phyſical Journal.

Gentlemen,

SHOULD the following remarks on the ſubject of Animal Impregnation, contain any thing in your opinion worthy of being ſubmitted to the public, your inſertion of them in the Medical Journal, will oblige

Your moſt obedient ſervant,

July 21, 1799. R. B. M.

Few ſubjects have oftener engaged the attention of the phyſiologiſt, than animal impregnation. From the time of Pythagoras, to the preſent, a number of theories have been preſented to us, many of which have been ingenious, and ſome very ridiculous. Among the number of thoſe which are now almoſt forgotten, I think that of Harvey merits notice; and the more ſo, as I think it bears a conſiderable ſimilitude to the opinion advanced by Dr. Haighton, in a very ingenious paper publiſhed in the "*Philoſophical Tranſactions*," Part I. 1797.—There have been few phyſiologiſts, except Harvey and Dr. Haighton, who have not ſuppoſed that the rudiments of the fœtus exiſted in the male ſemen; and it is well known, that the theory ſupported by Lieuwenhoek ſuppoſed that the fœtus in miniature, endued with animal life, was actually contained in the male ſemen

ſemen.—This hypotheſis, ridiculous as it may now appear, was greedily and almoſt univerſally received at one time; a ſtriking proof of the fondneſs for the marvellous, to which human nature is ſo prone, and which is ſo injurious to the cauſe of truth.

Bidding adieu to theſe idle opinions, I will now take the liberty of making a few remarks on the theory propoſed by Dr. Haighton.

It appears from the reſult of Dr. Haighton's well-directed experiments, that the formation of *corpora lutea* in the ovaria is the true teſt of impregnation having happened, and that the contact of the ſemen with the ovaria is not neceſſary to produce this effect; which is aſcribed to *ſympathy or conſent of parts*.—This expreſſion, however, does not perhaps convey a very clear idea of the ſubject. Might I be allowed to turn commentator, I ſhould ſay, that the act of coition induces impregnation, and that the ſemen paſſing into the vagina, is thence abſorbed, and carried into the general ſyſtem, where, by its peculiar ſtimulus, it produces thoſe changes, which happen after impregnation, in the uterus, its appendages, and the breaſts; ſo that I conſider the ſtimulus of the ſemen as perfecting what the ſtimulus of coition had begun.

Whether my comment will ſerve to elucidate the original, remains for others to determine; but before I conclude, I ſhall endeavour to obviate one objection which may be made to this theory.—It may be ſaid, if impregnation is occaſioned merely by a ſtimulus, how is it that females never conceive from any cauſe, except the introduction of ſemen into the vagina? This query, however, would hardly be conſidered as a difficulty by an abettor of the theory, and I ſhould not have noticed it, had it not afforded me an opportunity for mentioning a remarkable change which ſometimes takes place in the ovaria; and which I think affords ſupport to Dr. Haighton's theory. In anſwer, then, to the above-mentioned query, I would ſay, that proper conception can take place from no ſtimulus except ſemen, yet that ſome of the changes conſequent to impregnation, may, and do ſometimes happen, from ſtimuli of other kinds. It is well known to thoſe who are in the habit of diſſecting, that hair, teeth, and other fœtal remains, are ſometimes found in the ovaria, and ſome appearances of this kind have been obſerved in ſubjects, where it was evident that impregnation could not have taken place from coition. This circumſtance led Mr. Hunter to explain the growth of hair in this ſituation, by ſaying, "that the ovarium had taken on a cuticular ſtructure;" but I think that it is much more eaſily and rationally explained, by ſuppoſing that in thoſe caſes, a very imperfect kind of impregnation had taken place, from ſome unuſual ſtimulus; and it will, perhaps, be found, that ſome other diſeaſed

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alterations occaſionally happening in the female ſyſtem, may with propriety be referred to the ſame cauſe.

Thoſe remarks are ſubmitted to the public merely as conjectures, which if they are not perfectly juſt, may aſſiſt in the attainment of truth by promoting inquiry.

Extracts from Cit. LOMBART's *Obſervations on Chirurgical Caſes, &c.*

[Continued from our laſt Number, pp. 46—50.

AMONG theſe obſervations (ſays the French editor), the ſixth and ſeventh are particularly worthy of attention, as they evince the danger of attempting to cure particular ſpecies of *fiſtula ani*, eſpecially when Nature appears to have made choice of this canal to diſcharge matter, the retention of which would neceſſarily effect the diſſolution of the patient.

SIXTH OBSERVATION.

A Clergyman of Réthel-Mazarin was afflicted for a number of years with a ſuffocative aſthma, in which he had a remiſſion of four hours only in the four and twenty, and this after an abundant expectoration. The ſymptoms of the diſeaſe left not the ſmalleſt doubt of the ſtate of the patient. In the ſpring of 1783 he made a journey on horſeback. This exerciſe occaſioned an abceſs at the extremity of the anus, which was ſucceeded by a fiſtula. Four months after this happened I was called in (ſays Cit. LOMBART), and as I knew his ſtate previous to the appearance of the fiſtulous ulcer, I perſuaded him to conſider this ſymptom as a ſalutary effort of Nature to relieve him from a diſeaſe which would ſoon have terminated his life. I remarked to him that he was no longer troubled with his habitual aſthmatic affection; that the expectoration which had undermined his conſtitution had now abated; that his reſpiration was free, his lungs ſound; and that he had again acquired muſcular fulneſs and energy; that his ſleep was no longer interrupted; and in ſhort, that if he wiſhed to continue in a good ſtate of health, he muſt relinquiſh the idea of curing his fiſtula. Soon afterwards the patient changed his reſidence, and came to Meſiny. I was informed that he had reſolved to undergo the operation. I forewarned him of the danger to which he would expoſe himſelf; and adviſed him to nominate an executor, if he was determined to venture on the operation. However, no credit was given to my ſuggeſtions, nay the officiating ſurgeon treated them as merely chimerical. At length the clergyman underwent the operation, but beneficent Nature ſeemed to counteract it. The fiſtula broke out again, and the operation was again repeated, and the

complaint

complaint was ſoon apparently cured. But the patient was ſcarcely in a ſtate of convaleſcence, when the ſymptoms which had affected his breaſt again returned in ſuch an aggravated degree, that his ſiſter applied to me for advice. I employed leeches, veſicatories, and every other means preſcribed in ſimilar caſes, but in vain. Phthiſis pulmonalis made ſo rapid a progreſs, that this unfortunate gentleman died a few months after, of a conſumption.

Seventh Observation.

An attorney of the Bailiwick of Réthel was during ſeveral days afflicted at different intervals, with ſpaſmodic colics, which often attacked him in the form of *cholera morbus*. He was ſuddenly troubled with an abſceſs, ſucceeded by a fiſtula, which only extended from 12 to 15 millimêtres (half an inch) in depth. I adviſed him not to attempt the cure of it precipitately, but to keep the part affected in the moſt eaſy ſtate, and to uſe ſimple injections. I kept the fiſtula open with prepared ſponge, and obſerved to the patient that the colics to which he was liable had not returned ſince his abſceſs happened. In this ſtate he lived for a year, without experiencing the leaſt change in his health; but he at length became impatient to be relieved from a ſtate more diſagreable than dangerous. The operation was performed by a ſkilful ſurgeon, who was not informed of the circumſtances which had preceded the fiſtula. Some time after his cure, the attorney obſerved a conſiderable change in his health; and the colics returned with ſuch violence, that in the month of January, 1787, an extreme paroxyſm cauſed his death.

Being called in to open the body, I found that all the viſcera of the abdomen had been affected by the inflammation; the inteſtines were in a gangrenous ſtate, they appeared to be entangled, and preſented an heterogenous maſs. No morbid appearance was perceptible in the kidneys, ureters, or bladder, which could juſtify the prevailing ſuppoſition that the patient's death had been occaſioned by long-continued nephritic attacks.

An Hiſtorical View of Surgery in the Sixteenth Century.

[Continued from our last Number, pp. 54—60.]

§. 7. THE diſcovery of the high operation was the work of neceſſity and accident. Peter Franco, of Turrieres, in Provence, ſurgeon at Berne, Lauſanne, and Orange, was requeſted in the year 1560 to perform this operation for lithotomy, at Lauſanne, on a child two years of age. He had already begun to operate with the ſmall apparatus, when he found that the ſtone was of the ſize of a hen's egg, and conſequently too large to

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be removed in that manner. The child's parents insisted that the operation should nevertheless be finished; and as the bladder very much projected above the *ossa pubis*, he determined upon making the incision above these bones. Although he eventually succeeded in this bold attempt, yet he prudently dissuades his brethren from imitating that practice: and indeed the danger to be apprehended from the effusion of the urine into the abdomen is so great, that even the improvements made by DOUGLAS, on the high apparatus of Franco, have not much diminished it.—In order to remove the stone from female patients, Franco rejects both the large and smaller apparatus, while he proposes merely the dilatation of the urethra, by means of an instrument invented by himself; after which he extracts the stone with the forceps, without dissecting the parts. He likewise invented a gorgeret, and a forceps, the arms of which expand in the bladder; but it must be acknowledged, that the use of these instruments is extremely inconvenient.

§. 8. A very painful and unnecessary operation excited great attention during this century, although it had been previously performed. The reader will perhaps smile at an attempt to repair and restore that prominent part of the human face, the nose, when mutilated by accident.—BARRI, an Italian anthor, in his "*Italia illustrata,*" page 1060, fol. Francof. 1600, considers VINCENT. VIANEO as the inventor of this singular practice.

Two Sicilian surgeons of the name of BRANCA, father and son, had so early as the latter end of the fifteenth century, acquired celebrity by the successful renovation of noses; an art which became hereditary in the family of the BOJANI. But CASPAR TAGLIACOZZI, Professor at Bologna, raised this art to such high perfection, as to render it one of the principal branches of surgery: he became so celebrated by his operations, that his cotemporaries erected a public monument at Bologna, where he is represented with a nose in his hand. This operation is described in an interesting work, intitled, "*Tagliacot. de curtor. chirurgia*;" fol. Venet. 1597; in which he compares it (p. 47) to the ingrafting of trees, expatiates on the dignity and ornament of the nose, and endeavours to prove that there is not the least danger in cutting out a piece from the biceps muscle of the arm. With respect to the diet to be observed during the operation, he gives ample and rigid instructions, while he maintains that the inoculated nose is possessed of a more acute smell, and that it generally grows much larger and stronger than the organ which had been accidentally lost. The hair on the new nose, according to his account, in many instances grows so fast that it must be regularly shaved.

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Two respectable eye-witnesses, FORTUN. LICETI, in his book, "*De Monstris*," lib. ii, cap. 29, p. 108, and JOH. BAPT. CORTESI, as quoted by HALLER, in his "*Biblioth. Chirurg.*" Vol. I. p. 293, confirm the truth of Tagliocozzi's assertions, that he has successfully restored not only noses, but likewise ears and lips. MARC. ANT. ULMO, in his "*Physiol. barbæ human.*" p. 230, fol. Venet. 1604; and RANCHIN, in his "*Questiones en Chirurg.*" p. 118, both speak in favour of this operation:—VESALIUS also, in his "*Chirurg. magn.*" lib. iii, cap. 9, p. 983, describes the whole process of operating, with all the minutiæ, as if he actually had performed it himself. In the "*Oeuvres d'Ambr. Paré,*" liv. xxiii. cap. 2. p. 574, this illustrious writer relates the case of a knight, le Cadet de ST. THOAN, who having lost his nose by a cut, had another successfully engrafted by this artificial process. FABR. VON HILDEN, in his "*Centur.* III." Observ. xxxi, p. 214, fol. Francof. 1646, also mentions a remarkable case of a lady, who recovered her nose by means of this operation, performed in the year 1592, by GRIFFON, a surgeon at Lausanne.

§. 9. It will be necessary for the elucidation of chirurgical history, to take a short view of the general state of surgery in the sixteenth century, and to give some account of the violent disputes which prevailed in France, on the prerogatives of the medical art over those of surgery, but particularly on the contested privileges of the surgeons. Although the documents relative to this subject have been partly printed, or have at least not been withheld from the inspection of historians, yet no part of medical history has been conducted with more partiality, and less regard to truth, by both parties, than that which is now under consideration. The author of the work entitled "*Recherches sur l'origine et le progrès de la Chirurgie en France*" is guilty of the grossest misrepresentation, though this book has by some been ascribed to FRANC. QUESNAY. He is so much attached to party-interest, that his account resembles more a judicial plea than a faithful relation of facts.—PASQUIER, in his "*Recherches de la France,*" fol. *Paris,* 1620, deserves much more credit, and for this reason, the most important points relative to that extraordinary dispute have been briefly collected from his more authentic statement.

The surgeons of Paris have, since the time of LANFRANCHI formed a distinct body, called the College of St. Côme; they obtained additional and respectable privileges of PHILIP, surnamed the Fair, in 1311, which entitled them to equal rank with the members of the medical faculty; hence they could not bear the idea that barbers should usurp the right of bleeding, applying plasters, and treating external injuries and ulcers. In consequence of this encroach-

encroachment, the ſurgeons, in 1425, obtained an act or arrêt of the Parliament of Paris, by which the performance of chirurgical operations was prohibited to the barbers, while they were permitted to dreſs wounds, and extirpate corns by the knife. But the phyſicians embraced the cauſe of the barbers, and inſtructed them in the practice of ſurgery, with a view to take vengeance on the ſurgeons, who, it was affirmed, had uſurped medical privileges. The complaint of grievances which the ſurgeons, on this occaſion, laid before the faculty, in the years 1491 and 1494, were not attended with any other effect, than the promiſe to change the ſituation of affairs; nevertheleſs, the members of the faculty were permitted to deliver anatomical lectures to barbers, in the French language. The ſurgeons again, though in vain, repreſented to the faculty, that they acted contrary to the laws made by themſelves, by permitting their members to inſtruct barbers in the knowledge of anatomy, and this in their native language. However, no other redreſs could be obtained, but that of licenſing the ſurgeons to undertake public diſſections, and of granting them a certain rank above the barbers, for which they paid ſixty *ſolidos* annually to the treaſurer of the faculty. This event took place in the year 1502; and in 1505 the ſurgeons renewed their application in the character of ſcholars or pupils to the faculty, whom they intreated to confirm their privileges; but HELIN, the ſenior of that body, ſent them the diſcouraging anſwer, that their pretended rights or immunities had been acquired by ſurreptitious means.

§ 10. In the ſame year, the phyſicians of Paris, as Paſquier expreſſes himſelf, paſſed the *Rubicon*, and entered into a formal contract with the barbers, who, on account of their implicit obedience, were patronized in preference to the ſurgeons. The barbers were conſequently, in contempt of the ſurgeons, pronounced to be the true ſcholars of the faculty: they were matriculated under that name; but a promiſe was exacted from them, according to which they were not allowed to adminiſter internal medicines, without conſulting, in every caſe, a member of the medical faculty; they farther agreed to undergo an examination, previous to their commencing buſineſs as maſters. Since that period, the barbers have been no longer called *barbitonſores*, the complaiſant faculty having conferred on them the more honourable title of *Chirurgici a Tonſtrina*, or *Tonſores Chirurgici*. A few days after this change, the faculty proceeded to ſuch extremities as to proſecute the ſurgeons in a court of law, becauſe they had received information, that ſeveral ſurgeons had preſcribed internal remedies, without the previous advice of a phyſician.

Probably, in that age, no man of genius and activity preſided over the Collége de St. Côme; for no ſooner was STEPHEN BARAT elected preſident of

of that college, than the ſituation of affairs was thoroughly changed. In the year 1515, he urged the faculty to exempt the ſociety of ſurgeons from the oppreſſive tax they were obliged to pay annually, and not to compel them to attend the lectures given by members of the faculty. As Barat addreſſed himſelf to the whole univerſity, and as old Helin, the moſt zealous antagoniſt of the ſurgeons, died in the ſame year, this manly remonſtrance had the deſired effect. The univerſity iſſued a decree, by which the ſurgeons of Paris were nominated *Scholaſtici;* or perpetual ſcholars of the faculty. But ſtill greater immunities were granted to the ſurgeons in 1545, by the good offices of WILLIAM VAVASSEUR, principal ſurgeon at the court of FRANCIS I. He ſucceſsfully effected a complete ſeparation of the barbers from the ſurgeons, and at the ſame time obtained a decree, in conformity to which every maſter of the chirurgical art, if he wiſhed to obtain the privilege of exerciſing his profeſſion, was obliged to ſtudy the Latin language, logic, and other elementary ſciences. By this favourable regulation, the College of Surgeons was at once raiſed to the rank of a learned ſchool, and obtained at length the right of creating Maſters, Bachelors, Licentiates, and Doctors of Surgery. In conſequence of this arrangement, HENRY II. granted to the members of the Chirurgical College of St. Louis, all the prerogatives attached to a faculty; and the patent iſſued on that occaſion, was regiſtered in the parliamentary laws, under the name of *Lettres d'Octroi.*

§ 11. In the year 1551, the medical faculty, under the deanery of JOHN DU HAMEL, recommenced the diſpute againſt the ſurgeons. Although RUDOLPH LE FORT, dean of the College of St. Louis, zealouſly defended the ſurgeons, yet Du Hamel found the means of procuring a repeal of the decree enacted in 1515; and, contrary to the ſpirit of that law, the ſurgeons were again obliged to ſubmit to an examination before the medical faculty. Under HENRY III, however, the ſurgeons once more obtained a confirmation of their privileges, in 1577, by virtue of which they were entitled to confer academical dignities; and, notwithſtanding the new oppoſition of the faculty in 1579, the ſurgeons, as well as the univerſity of Paris, were in the ſame year favoured with an indult of Pope GREGORY XIII, while DE THOU vindicated the cauſe of the former, in a ſpirited and ſucceſsful manner, againſt the oppreſſions of the faculty. The colleges ſubſequently eſtabliſhed by ſurgeons, acquired ſuch a degree of authority, that, in the year 1596, they were empowered to give ſerious orders to the barbers, in difficult chirurgical caſes always to conſult a ſworn ſurgeon, and upon no account to undertake the treatment of any other but the ſlighteſt external injuries. Theſe privileges and prerogatives of the ſurgeons of

Paris were farther confirmed by Henry the Great, in 1602; and Louis XIII, in 1614.

[*In our next Number, we ſhall continue this article, and begin with an account of the moſt celebrated ſurgeons of that century, in chronological order.*]

A Conciſe Hiſtory of the principal Diſcoveries in Anatomy.

[Continued from our last Number, pp. 60—69.]

§ 10. To relate the moſt important diſcoveries in ſyſtematic order, it will be neceſſary to begin with *Oſteology*. The moſt intereſting diſcovery which was made in this branch of anatomy, related to the ear. Mondini and his followers, fearing they ſhould commit a crime by ſawing through the *os temporis*, had conſequently left this important organ of ſenſation entirely unexamined. Alexander Achillini,* about the year 1480, diſcovered the two bones of the labyrinth, the malleus and the incus, and even then deſcribed their uſes. Berengar had a more accurate notion of the uſe of theſe bones; he deſcribed the *ſeptum auris*, and doubted whether it originated from the auditory nerve, or from the membranes of the brain. Vesalius added to theſe the veſtibulum of the labyrinth, which he called *forum metallicum*, and the manubrium of the malleus, of which Stephanus knew as little as of the auditory bones in general. The third bone of the ear, which we call *ſtapes*, was yet undiſcovered. Ingrassias, Eustachius, Columbus, and Lewis Collado, a pupil of Veſalius, and Profeſſor at Valencia, contend for the honour of this diſcovery. Ingraſſias, however, ſeems to have the ſtrongeſt claim to it; for he maintains that he ought to be conſidered as the diſcoverer, having demonſtrated the exiſtence of the *ſtapes* publicly at Naples, in the year 1546. This aſſertion gains additional probability, when we compare with it the teſtimony of the juſt Fallopius, who obtained the firſt information of it in the year 1548, from a pupil of Ingraſſias. Veſalius and Coiter are likewiſe of opinion that Ingraſſias was the real diſcoverer of it. It cannot, however, be denied that Euſtachius himſelf may be allowed the merit of a ſecond diſcovery of this bone; but Columbus and Collado are much too late with their pretended diſcovery, the account of the latter having been firſt publiſhed in the year 1555. Euſtachius diſcovered the tube which is called after his name, and the ſpiral line: he has alſo given a very good deſcription of the membranous zone of the cochlea. Fallopius was the firſt who denominated the membrane of the tympanum, and gave an excellent deſcription of it.

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He had a knowledge of the aqueous duct of the vestibulum, of the nervous duct of the pyramid, of the lamina spiralis, and of the scalæ of the cochlea, as well as of the foramen ovale. ARANZI also had examined these parts very minutely, for he describes the round condyle of the anterior crus of the incus. VOLCHER KOYTER gives a good description of the nervous duct in the pyramid of the temporal bone, one sulcus of which is pervaded by the optic nerve; he knew the round and oval fenestra, the labyrinth, the semicircular canals, and the long process of the incus. ALBERTI and PLATER have likewise given a very good description of these parts.

§. 11. GUIDO GUIDI was the first who caused the pyramidal sanguiferous ducts of the temporal bone *(sinus petrosi)* to be correctly drawn; but they had been before described by Fallopius. The *os basilare* was first examined more minutely by Berengar. He discovered the cavities in its basis *(sinus sphenoidei)*, which terminate in the upper duct of the nasal cavity, and are frequently connected with the ventricles of the brain, by a foramen in the *ephippium*; hence he accounts for the origin of colds in the head, by an accumulation of mucus in those ventricles. Vesalius indeed accurately described this bone, together with its wings (*alæ*) and points (*apices*); but he would not admit its immediate connection with the ventricles of the brain, which really does not exist in many instances. SYLVIUS insisted upon the aforementioned connection being always admitted. Fallopius at length discovered that such ventricles are often not found in infants, and Ingrassias described the *os basilare* so carefully, and particularly explained the different modifications which it forms with the other bones so clearly, that it is scarcely possible to give a better description. GALEN had maintained, that there is a fissure between the dental cells, or on the external and anterior part of the upper jaw-bone, which in animals separates the intermaxillare from the os palatinum, but is never found in human beings. Vesalius contradicted this assertion, but admitted that a fissure divided the *apophysis palatina ossis maxillaris superioris* towards the inside, and in that direction disappeared between the dens incisor and the angular tooth. SYLVIUS again confounded the two fissures with each other, and thereby perplexed himself. Ingrassias gave a tolerably good description of the lower ossa spongiosa, and according to Berengar, who was the first that made this discovery, the real perforation of the os cribriforme, which formerly served to account for colds in the head, was denied by several anatomists. Guidi caused a good drawing to be made of the articulated condyles of the inferior maxilla with their cartilaginous superficies, and ALBERTI was the first who described the *ossa wormiana*. The *os hyoides* was represented by

by Vesalius, and all those who copied his plates, much larger than it is in a natural state, because the pieces of bone which are found in the ligaments of the hyoides of aged people, were mistaken for necessary parts of the bone itself. This prejudice was exploded only, after Eustachius had more minutely investigated the subject.

§. 12. Ingrassias rejected the foramina in the first vertebra of the neck, which Galen, misled by the observations he had made in dissecting apes, had adopted. Ingrassias, on the contrary, proved that sulci were actually in the atlas of the vertebral artery, and that the superfices of the ligaments of the occiput formed cavities, in conjunction with the superfices of the ligaments of the atlas. Eustachius, however, defended Galen, by asserting that the foramina ought to be denominated sulci. The number of the pectoral bones occasioned another dispute, which was carried on with great acrimony between Vesalius and Sylvius.—Galen had adopted seven in the human skeleton, but Vesalius proved that there were only three, and that his opponent had again been misled by the skeleton of a monkey.* Sylvius objected to the assertion, that men had been larger and taller in the time of Galen, and had seven pectoral bones, but that in this dwarfish century, three only could be found.—Fallopius and Eustachius, who thought that this evasion was very ridiculous, nevertheless asserted, that in the embryo the sternum was composed of seven cartilages, which formed only a single bone in adults, and that Galen, having probably divided it according to the number of the ribs, was excusable. Vesalius was the first who proved, in opposition to Galen, that the first rib was immoveably connected with the sternum: Columbus, however, maintained a contrary opinion, merely to contradict his instructor. Sylvius observed also in the middle breast-bone, the large and disproportionate foramen, which indeed is frequently found there. The number of the *ossa cruciata* also excited the attention of anatomists; as Galen had mentioned only three, though from five to six were actually found. Vesalius was the first who demonstrated this, and Eustachius expressed himself in this instance rather unfavourably with regard to Galen. Vesalius was likewise the first who, from accurate experience, refuted the supposition of an incorruptible bone in the heart. Ingrassias afterwards corroborated this refutation. The former asserted, that the bones of the hand are not totally destitute of medullary substance, as Galen had maintained; and Sylvius again endeavoured to refute his assertion, by the absurd argument that the bones in former times, had been firmer and harder, and consequently required no such substance. The anatomists, in the beginning of this century, differed in opinion concerning the number of bones in the tarsus. Achilinus reckoned in the year 1502 only five bones in the

tarsus,

tarſus, probably becauſe he had conſidered the oſſa cuneiformia as one; but in the following year he found all the ſeven. Veſalius rejected the large curvature which Galen aſcribed to the os humeri, and the os ilium; while Sylvius defended Galen, by aſſerting, that the bones had become more ſtraight by the modern mode of dreſs. He vindicated, in a ſimilar manner, Galen's neglect in deſcribing the cartilages of the extremities of the bones: "In former times," ſaid he, "the bones were more ſolid, and conſequently required no cartilages." Stephanus knew, and deſcribed HAVER's *Synovia* in the joints of the bones.

§. 13. With reſpect to *Myology*, anatomiſts began to examine the ſtructure and powers of the muſcular ſyſtem. Galen had maintained, that a muſcle was compoſed of tendinous and nervous fibres. Veſalius, on the contrary, demonſtrated that there was no proportion between the nerves and muſcles; that frequently large nerves with numerous ramifications pervade the ſmaller muſcles, while only a few nerves paſs through the ſtrongeſt muſcles of the human body, for inſtance, the heart; that tendons differ entirely from muſcles, and rather approximate to the nature of ligaments. The muſcular fibre has, according to his opinion, a ſelf-ſubſiſtent power, capable of primary motion; nor does it loſe its capability of action, if it be wounded in a longitudinal direction. Fallopius explained this opinion more perſpicuouſly, and proved particularly, that motion, in every inſtance, is exerted only where muſcular fibres pre-exiſt; that it depends not always excluſively on the direction of thoſe fibres; and that conſequently it cannot be maintained with the ancients, that the oblique fibres effected a retentive, while the tranſverſe cauſed the protruding motion. Columbus traced the nerves from their ramifications to the muſcular fibre, and ſhewed that the latter apparently often originates from the former. The muſcular membrane (*panniculus carnoſus*), which Galen had endeavoured to find in the whole extent of the cutis, was aſcribed by Veſalius to particular animals only. Stephanus alſo denied its exiſtence in the human body, and Koyter demonſtrated that the porcupine, by means of this membrane, was enabled to convolve itſelf. The majority of the anatomiſts of this century agreed, that a peculiar membrane covered the muſcles, and ſeparated them from each other; and we are indebted to STENONIS for the refutation of this error.

Many of the ſeparate muſcles were at this period diſcovered and properly denominated; others were more accurately deſcribed, and the incorrect anatomical accounts of the ancients, as well as the difference between the human and animal muſcles, were pointed out. Stephanus, like his prede-

ceſſors

cessors, mistook the frontal and occipital muscle for the periosteum, which was surrounded only with much cellular texture and adipous membrane. Fallopius, however, described it first very minutely and correctly. The doctrine of the ophthalmic muscles, and of their use, was still blended with many errors. Berengar enumerated six pair, and a solitary one; the the latter, in animals, restrains the eye, and winds itself closely round the optic nerve: this muscle he farther supposed to exist in man.—Even Vesalius believed in the existence of this muscle, and besides considered the sphincter of the eye-lids as two different muscles. Fallopius refuted both these erroneous notions, and proved that the muscle in question was found only in herbivorous animals; and that the sphincter of the eye-lids was only a single one. Vesalius, however, obstinately contended for the existence of this internal muscle, and imputed its obscurity, in some human bodies, to leanness. Columbus refuted him likewise. Aranzi discovered the elevator muscle of the upper eye-lid in the year 1548, while he was a pupil of Maggi; but Fallopius probably knew nothing of this muscle at that time, as he claimed the merit of having discovered it in the year 1553. Aranzi is wrong in asserting, that the musculi recti of the aged arise from the os basilare. Koyter discovered the corrugator supercilii, or contractor of the eye-brows.

§. 14. It was even at this time generally understood, that the muscles of the ear perform voluntary motion: one of the retractors of this organ was also discovered; it was represented by Eustachius, and described by Columbus. The muscles of the internal auditory organs also became the objects of anatomical investigation. Eustachius very accurately described the dilatator and depressor of the membrana tympani, and the muscle of the stapes; and Koyter's description is also agreeable to nature. Aranzi knew the dilatator of the membrana tympani, but was ignorant whether it was an artery or a nerve: and Varoli denied for a long time the existence of these muscles, mistaking them for nerves lacerated in sawing through the temporal bone. He at length became sensible of his error, at least with regard to the muscles of the stapes, and even maintained that they could be spontaneously moved. Vesalius descanted on internal muscles of the nose, which were to serve the purpose of contracting it; but Columbus objected that he had found these muscles only in animals, and described in their place the external contractors of the foramen nasale. Posthius, on the contrary, assures us that the discovery of Vesalius really could be corroborated by instances in very muscular subjects. Vesalius has an equally high opinion of his discovery of a concealed muscle of the cavum oris, which is the pterygoideus internus.—Fallopius added the pterygoideus externus, and the circumflexus palati.

Vesalius

Vesalius also pretended to have discovered between the os hyoides and the epiglottis, muscles (*hyo-epiglottideos*), which however were considered by Fallopius and Columbus as non-entities. Fallopius, besides, admitted only four muscles of the tongue, the stylo-glossus, the genio-glossus, the hyo-glossus, and the lingualis; though Vesalius had mentioned a greater number. Fallopius has, however, committed a great mistake, in asserting that the stylo-pharingeus presses against the tongue. Eustachius for the first time, mentions the stylo-hyoideus, and Berengar the thyreo-epiglotticus. The omo-hyoideus which the ancient anatomists supposed to arise from the caracoid process of the scapula, was traced from the superior margin of this bone by Columbus, who refuted Galen's assertion, that this muscle served to put the shoulder in motion. Eustachius caused correct drawings to be made of the muscles of the head, the neck, and particularly those of the cervix. Vesalius erroneously derives the biceps muscle of the upper jaw from the processus styloideus, whereas it arises from the processus mammillaris. Fallopius describes the descending muscle of the neck, the discovery of which has been ascribed by some to DIEMERBROEK, and attributes to the subclavian muscle the power of drawing the first rib upwards. He denies, on the contrary, though perhaps unjustly, that the large serrated muscle contributes any thing towards respiration. Fallopius mentions three muscles, instead of the scalenus of which Galen speaks, and we now know of four or five. He describes the internal muscle of the breast (*sterno-costalis*) as consisting always of four parts, though this muscle is subject to the most diversified changes.

§. 15. The notions, which Vesalius had of the intercostal muscles and their uses, were yet extremely obscure: he knew, however, that the functions of the external cannot be opposed to those of the internal intercostal muscles, as described by Galen, namely, that the external intercostal muscles contract the cavity of the thorax, while the internal ones expand it. Vesalius justly remarks, that both merely draw the ribs together, alternately. Guidi, on the contrary, believed that the external intercostal muscles only give way to the exertion of the internal ones, without acting themselves; and even Aranzi was of opinion, that the intercostal muscles served only as a septum, and exercised no particular action, FABRICIUS coincides with Galen, but thinks that his real opinion is contained only in those passages in which he says, that the external intercostal muscles expand, and the internal ones contract the cavity of thorax. The other passages of Galen, in which the contrary is affirmed, Fabricius pronounces spurious. He thinks that the cavity of the thorax must be expanded by the ribs being drawn upwards. Amongst the abdominal muscles, those which descend

obliquely,

obliquely, together with the pyramidal muscles, were well described by Fallopius; he also was acquainted with Poupart's ligament *(ligamentum inguinale)*. Piccolhuomini was the first anatomist who denominated the white line *(linea alba musculorum abdominalium)*. The doctrine of the superior extremities *(artus superiores)* has obtained much more perspicuity by Cannani's representation and description. In the second figure, the flexor sublimis digitorum is represented, and divides itself *here* into five tendinous parts: the third contains the ulnaris internus; the eighteenth, the lumbrical muscles, and the flexor of the little finger: the nineteenth contains the muscle of the palm *(palmaris brevis)*, which Valverde afterwards copied, and which Fallopius ascribed to Cannani as an important discovery. This muscle was believed at first to expand the palm of the hand: we know, however, that it serves to contract it. The short flexor of the thumb, the seven muscles between the bones of the metacarpus, and the abductor of the little finger, have been, if not discovered, at least described first in a perspicuous manner by Cannani. It is to be regretted, that he in general represents the muscles unnaturally thick and tumefied! We find, indeed, the coraco-brachialis *(perforatus Casserii)* previously, though rudely, delineated in the work of Vesalius; but Aranzi was the first who gave a correct description of it. The muscles of the sura, and the transverse muscle of the *planta pedis*, were discovered by Sylvius, and Fabricius described the latter correctly. The long extensor of the toes was discovered by Columbus, the pyriform muscle of the os ilium by Fallopius, and Vesalius investigated the use of the muscle of the poples more minutely, and maintained that it did not produce a perceptible flexion of the tibia. Fabricius observed the two-fold organization of this muscle.

§. 16. The greatest and most important discoveries were made in *angiology*, and the farther improvement of it occasioned the foundation of a new system, which changed the whole of the theory and practice of medicine: the veins had hitherto been considered as the principal vessels; the real blood, and the function of nutrition had been exclusively ascribed to them, and they had likewise been uniformly placed first in the compends of anatomy. Vesalius himself adopts this arrangement, as the arteries appeared to him to be only the conductors of the vital spirits from the heart throughout the body; he treats of them after the veins, and far less minutely than of the latter. Although he observed, on applying the ligature to arteries, a swelling between the parts compressed and the heart, yet this was caused, in his opinion, by stopping the efflux of the blood from that organ. But perceiving that this swelling under similar circumstances did not take place in the veins, he imputed it principally to the

accumu-

accumulation of the vital principle which is combined with the circulating blood in the arteries. It was generally believed, that the blood circulated to and from the vessels, according to the stimulus existing in different parts of the body, and particularly, that respiration propels the blood into the vessels by inspiring, and restores it to the heart by expiration. Galen's opinion, that the veins originated in the liver, had been exploded long before that period. Vesalius, especially, defended the hypothesis of ARISTOTLE, that the vena cava proceeded from the heart, and SUSIUS had publicly and zealously defended the same theory at Bologna, in the year 1543. Sylvius, however, continued to appeal constantly to the infallible Galen; and even Columbus, Eustachius, and Fallopius, earnestly maintained that the vena cava originated in the liver, and that in ascending it communicated with the heart by only one branch. It was supposed that the vena cava was united in the liver with the vena portæ, by forming considerable anastomoses, which, in this century, were generally conjectured to abound in the body. Varoli and DU LAURENS seriously endeavoured to prove the existence of these extensive anastomoses between the vena portæ and the vena cava. Berengar had formerly conjectured the existence of such large inosculations between the seminal arteries and their veins. Eustachius united, in a similar manner, the hypogastric veins with those of the bladder; and Fallopius did the same with the arteries of the mesentery and those of the rectum. It was generally believed, in imitation of Galen, that anastomoses subsisted between the veins of the breasts and those of the abdomen; with a view to account for the consensus between the uterus and the breasts. These inosculations are indeed very perceptible and easily demonstrated.

§. 17. More minute investigations into the nature of the valves of the larger vessels of the heart, and of the veins themselves, at that time occasioned deep reflections on the use of these membranes, and gradually opened the way to the theory of the circulation of the blood. We are indeed much indebted to Berengar in this respect. He described the semi-lunar valve of the ascending vena cava, and the valvulæ mitrales of the pulmonary vein. They appeared to him similar, because they did not fit completely, but shewed some laxity, were not possessed of equal firmness with the other valves, and always became contracted after the dilatation of the heart. He farther discovered the large tricuspidal valve between the oracle of the vena cava and the right ventricle of the heart, the use of which appeared to him to be the prevention of the blood in the heart, from its reflux into the cyst of the vena cava. He also described the arterial semilunar valves in the pulmonary artery and in the aorta, shewed the similarity of their structure, and supposed that, as they opened towards the heart, their function was to prevent the reflux of the blood. Sylvius had likewise observed the semilunar valve in the lower ascending vena cava, which erroneously has been denomi-

denominated after Eustachius, who indeed has described it, and given an imperfect representation, but certainly did not discover it. Vesalius has, by mistake, been considered as the discoverer of the mitral valves in the pulmonary vein, though he describes them better than Berengar; and he also shewed to Sylvius the valves in the aorta. Fallopius and Le Vasseur likewise knew the valves in the ascending vena cava, in the cyst of that vessel, and the arterial veins; and they were of the same opinion with Berengar, respecting the functions of those valves. Posthius expressed himself still more clearly with regard to the use of the valves in the large veins of the heart; and Aranzi described the cartilaginous edge of the valve in the pulmonary artery, and the little condyles of the mitral valves, which go by his name.

Valves were also discovered in several other veins. However, a series of years elapsed before the most accurate result was deduced from these observations. It has already been mentioned, that Cannani, in the year 1547, discovered on the orifice of the solitary vein (*vena sine pari*), a valve, which he supposed to be designed for preventing the superabundant influx of blood from the vena cava. Sylvius had previously observed similar valves in several other veins: but anatomists, nevertheless, treated Cannani's discovery with ridicule. Stephanus was, perhaps, the first who made this discovery, as he wrote prior to the year 1536, and hence deserves the greatest credit. Eustachius clearly perceived the valves in the coronary veins of the heart, of which he caused drawings to be made. In the crural veins, Posthius distinctly observed the valves in the year 1560, on the Anatomical Theatre of Montpellier; and a few years afterwards, SAL. ALBERTI made a similar discovery in the renal as well as the crural and other veins. In the year 1574, PAUL SARPI and Fabricius observed those valves in most of the veins of the human body; the latter furnished incomparable drawings of them, and explained their use, by stating that they were designed by Nature to prevent congestions, as well as too great dilatations of the veins. "In the arteries," said Fabricius, "the valves were unnecessary; as the influx and reflux of the blood here are not so much interrupted as in the veins. The valves are indispensable to the veins of the limbs; because, without them, irregularities might easily arise in those parts, on account of their varied and almost incessant motion. The veins of the brain and the pelvis require no valves, as the blood naturally flows with greater velocity into these parts." From this passage it is obvious, that Fabricius did not conceive the principal use of the valves;—namely, that of promoting the return of the blood to the heart; a discovery of the first importance, which seems to have been reserved for the superior genius of the immortal HARVEY.

[To be resumed in our next Number.]

HINTS

HINTS AND IMPROVEMENTS

IN THE PRACTICE OF

MEDICINE AND SURGERY.

Remarks on the Cure of Spaſmodic Aſthma.

DR. UNZER, in his valuable Manual of Medicine, page 1256, and foll has given ſome hints which well deſerve to be communicated to our readers. According to this writer, ſpaſmodic aſthma generally requires bleeding, where obvious plethora or hemorrhoidal affections, are the pre-diſpoſing cauſe of the diſeaſe; or when obſtinate ſpaſms warrant the application of extreme remedies: although veneſection has been found ſometimes rather to promote than to prevent the fatal cataſtrophe.

If the danger of ſuffocation does not require immediate relief, we may frequently and ſucceſsfully apply a good number of leeches, which may be put to the breaſt, the back, or whatever part ſeems to indicate the uſe of them, and particularly to the hemorrhoidal veins, where Dr. Unzer has in ſeveral inſtances obſerved them to afford ſingular relief. At the ſame time, two or three pretty ſtrong injections ought to be given at one hour's interval from each other, and after theſe, opium may be ſafely adminiſtered. Thus, for inſtance, he gave thirty drops of laudanum; or a mixture conſiſting of an ounce and a half of peppermint water, five and twenty drops of laudanum, the ſame quantity of the oleum C. C. and two drams of common ſyrup, to be taken at one draught.

If, however, the ſpaſms ſhould be connected with an acrimony of the fluids, in ſuch caſes the ſquill, with opium and ſalt of hartſhorn, may be given with advantage. This method may be adopted in all inſtances where ſpeedy relief is required, whether the breaſt be idiophatically affected, or by ſympathy with the ſtomach.

A very obſtinate ſpaſmodic aſthma was, according to Dr. WEIKARD, at length removed, by rubbing the feet every night with the tincture of cantharides.

Another German phyſician, Dr. LENTIN, aſſerts, that four grains of muſk have proved beneficial in an inveterate caſe of ſpaſmodic aſthma; and that, in general, the anti-hyſteric medicines may be ſafely and often ſucceſsfully preſcribed in every ſpecies of aſthma. Sometimes indurated glands, particularly in the neck, are the collateral ſymptoms of ſpaſmodic aſthma, and in ſuch caſes, the anti-hyſteric remedies deſerve the principal attention of the practitioner, while the ſpaſmodic paroxyſms ought to be treated like nervous affections ariſing from ſpaſms.

LE COMTE, a French writer, relates the following extraordinary caſe of a woman, who was in other reſpects healthy, but had from her infancy, almoſt every night, been troubled with an aſthmatic paroxyſm, increaſing with her years. On account of indurations in the breaſts, this patient was directed to take the extract of cicuta internally, which not only diſcuſſed the calloſity of her breaſts, but likewiſe alleviated her aſthmatic complaint and at length completely cured it. She took this medicine during the almoſt incredible time of four years, in the evening, in increaſed doſes, ſo that ſhe at length uſually ſwallowed forty grains for a doſe; nay, ſhe at one time increaſed the

doses to one hundred and twenty, and one hundred and forty-six grains; which, however, produced a violent narcotic effect, insomuch that when she recovered from this stupefaction, all objects appeared to her remarkably diminished. Sometimes she would suspend the use of the medicine for eight or nine days; and during the term of about two years and a half she had consumed no less than nineteen thousand grains of the extract of hemlock.

If external stimuli, arising from acid vapours, should occasion a spasmodic asthma, it will be readily perceived, that the only remedy is the removal of the exciting cause.—Thus, in the vicinity of Mount Vesuvius, the inhabitants were attacked with a convulsive asthma, after an eruption of this volcano, and most of the patients died on the third day, obviously from the fatal effects of venesection.

An ingenious Italian physician, Vivenzio, on the contrary, prescribed mucilaginous remedies, and the steam of a decoction of emollient herbs; and as soon as the sense of suffocation was overcome, he ordered twelve ounces of blood to be drawn, and the inhalation of emollient vapours to be continued. In this manner, says Della Torre, Vivenzio saved the life of almost every patient, without an expectoration or any remarkable crisis having taken place.

[*To be continued in our next Number.*]

A singular Case of Anasarca of the Liver.

Dr. Sachse, a German practitioner at Uelzen, relates, in the tenth Number of the "*Journal der Erfindungen*," the following remarkable case, which we are inclined to term an *abscess*, rather than *dropsy* of the liver.

A farmer's wife, thirty years of age, applied to him on the 4th of March, 1794, complaining of a hard, thick, and painful swelling, which extended from the short ribs of the right side to the pit of the stomach, and seemed to occupy the seat of the large right lobe of the liver.—The colour of her eyes as well as the skin, was natural; respiration somewhat difficult; the pulse small and rather irritated; the heat of the body natural; the *fæces* of a proper consistence and colour; decumbence on the right side difficult; sleep tolerably easy; the menses regular; no sweats at night, no shiverings accompanied with heat, nor apparent emaciation.—Formerly she had enjoyed good health, excepting some pains in her back and shoulder. Since the last 12 months she could not bear her stays tightly laced; and about three months ago she was seized with a burning pain in her right side and shoulder: she lost her appetite, which had usually been good; was troubled with nausea aud frequent vomiting, accompanied with febrile symptoms, insomuch that she was for five days confined to her bed. At that period the swelling in the right side appeared, which, however, was disregarded, while all other symptoms yielded to simple family remedies, although she felt, without intermission, a sense of pressure and burning heat in the part affected. These sensations, about three weeks previous to her consulting him, had become more intense, and the swelling of the part more extended.

The circumstances of the case here detailed, induced Dr. Sachse to believe that three months ago she had been afflicted with an acute inflammation of the liver, which had since been changed into a chronic induration. Hence he prescribed the taraxacum, senega, and radix graminis, in decoctions; antimonial remedies with gentle cathartics; and directed mercurial ointments to be rubbed in, with the necessary precaution. A week after these prescriptions, she again applied to Dr. Sachse, who resided at some distance from the patient's abode, and complained that she had experienced no relief; that on

on the contrary, her pains had become more violent, the ſwelling more extenſive, and that ſhe was troubled with ſlight ſhiverings and frequent flying heat. Theſe ſymptoms, together with an obſcure fluctuation he perceived in the part affected, which could not well bear to be touched, made him ſuppoſe that there was a collection of purulent matter, and that it was an abſceſs of the liver, which required to be opened by the lancet. Yet he was too timorous to venture on the operation, and directed therefore emollient poultices, pointing out the ſpot to which a roaſted onion ſhould be applied: this he did with a view to effect a more certain concretion of the liver with the peritoneum. In two days he ſaw her again; ſhe could not ſupport the very excruciating pain but in a reclined poſture; the fluctuation appeared ſtill more diſtinct, and the operation was now determined upon. The inciſion was made to the depth of an inch, and there appeared no *pus*, but, contrary to all expectation, an effuſion of *water* took place, which inſtantaneouſly alleviated the pains of the patient. The water flowed without intermiſſion till about four pounds and a half had been evacuated; it iſſued more freely when the patient bent herſelf backwards; was at firſt of a yellowiſh, afterwards a reddiſh, and then of a completely white colour; had a ſaline and ſomewhat ſweetiſh taſte; coagulated quickly, and at length had the appearance of weak hartſhorn jelly: on ſtirring it, tough yellowiſh threads ſeparated from it, which extended above the length of a yard without breaking, ſimilar to thoſe formed by the blood when agitated with rods. While the water, or rather lymph was ſtill trickling out of the ſmall wound, he applied a pledget and covered the orifice with thick compreſſes, to exclude the acceſs of air: thus it became gradually ſmaller, and healed without difficulty in eight days. Internally, Dr. Sachſe directed the uſe of antimonial remedies, with bark and ſmall doſes of rhubuarb, which, after having been continued for ſeveral weeks, effected a cure, excepting that the patient ſtill feels a continued but inconſiderable induration of the liver. And although ſhe has remained in good health for a twelvemonth after this attack, yet Dr. Sachſe remarks, that time only can determine whether ſhe will undergo a relapſe.

An Account of the Cachexia Africana.

As we doubt not, that this article will be found particularly worthy the attention of our readers, we have extracted it from the "*Medical Repoſitory*" printed at New-York, conducted by Drs. MITCHELL and MILLER. The author of it is Dr. CHISHOLM.

The ſimilarity between this diſeaſe, to which the negro ſlaves lately imported into the Weſt-Indies are ſubject, and one to which young females are liable, in moſt countries, we preſume will not eſcape the obſervation of practical readers: and we do not heſitate to pronounce, that the ſame theory may be ſafely applied to both.

"There is," ſays Dr. Chiſholm, "a diſeaſe to which the negroes, and particularly thoſe lately imported are much ſubject: it is named by us *Mal d'Eſtomac*, or *Cachexia Africana*; and from a conſtant ſymptom which attends it, *dirt-eating*, by ſome. (Dr. HUNTER; Diſeaſes of Jamaica.) Negroes alſo, who have been ſome time in the country, are ſubject to this diſeaſe, but not ſo frequently as amongſt the former. It affects thoſe who have, generally ſpeaking, been badly clothed, ill-fed and lodged, and whoſe conſtitutions have been worn out by hard labour. The mind partaking of the ſufferings of the body, is affected with noſtaglia, brooding over their ill-treatment, ſeparated from friends and relations, and doomed to ſuffer without daring to complain.

"The

"The firſt ſymptom, and which indeed is both the cauſe and effect, is a fondneſs for ſolitude, ſadneſs, grief, and deſpondency; a loſs of appetite, or a deſire only for what is pungent and ſtimulant; difficulty of breathing, eſpecially in walking up a hill; a painful gaſtrodynia; palpitation of the heart; general debility; drowſineſs; paleneſs of the face and palms of the hands; the tongue white, ſometimes with an appearance like ſtains of ink upon it; the lips colourleſs; the tunica adnata of a glaſſy whiteneſs, as alſo the teeth; the ſkin of an olive complexion, and cold to the touch, with a rough ſurface, and the papillæ elevated; anaſarcous ſwellings of the eye-lids, face, and extremities; water is afterwards collected in the belly and cheſt, and the unhappy ſufferer can only breathe in an erect poſture, for fear of inſtant ſuffocation; the pulſe is always ſmall, and generally becomes quicker towards night. There is, during the diſeaſe, an unwillingneſs to attempt, and inability to perform motion.

"Morbid changes take place throughout the alimentary canal, in conſequence of the vitiated ſtate of the gaſtric juice and impeded digeſtion; a morbid acidity prevails, and a ſymptom ariſes from this cauſe, which, with ſome has given name to the diſeaſe,—a habit of eating chalk, dirt, or whatever will obtund acrimony.

"This vitiated action is propagated throughout the whole alimentary canal; the lacteals are abraded by acrimonious fluids, and no longer poſſeſs the power of abſorbing healthy chyle; hence the lymphatic glands of the meſentery become inflamed and indurated. The blood poor, vapid, and colourleſs, no longer ſtimulates the heart and arteries to action; hence aſphyxia and ſudden death, and thoſe polypous concretions found in the heart after death.

"It is to the want of irritability of the blood that we are to aſcribe obſtruction of the menſtrual flux in women, in this diſeaſe.

"From this ſhort account of the diſeaſe, which has no other merit than truth, you will be prepared for the appearances upon diſſection:

"The ſtomach is found much enlarged, and thickened in its coats; the liver ſometimes enlarged and ſchirrous, but always preternaturally white; the gall-bladder ſometimes with biliary concretions; the bile never of a healthy appearance, generally thin and watery, and ſlightly yellow or green; the meſenteric glands indurated and ſchirrous. Thoſe appearances induced a medical practitioner in a neighbouring iſland to employ mercury, with a view of removing, as he ſuppoſed, obſtructions, but a very ſmall quantity of it excited ſuch terrible effects as obliged him to deſiſt. Accumulated irritability, from the abſtraction of the uſual ſtimuli, had rendered them more ſuſceptible of the ſlighteſt ſtimulus.

"From this view of the diſeaſe, the pathology and treatment of it, I conceive, will be eaſily underſtood Reſembling ſcurvy, in ſome reſpects, it differs from it only in the ſymptoms of putrid diatheſis not being ſo obvious—putrid animal food not having been here employed as an article of diet. The ſame defect of oxygen prevails in both diſeaſes; and it is probable, that we would find the ſame benefit from the uſe of aceſcent vegetables; but we have not here the ſame putrid diatheſis to obviate; and the ſtomach has been already ſo much debilitated by weak vegetable diet, that it requires a more ſtimulant plan—animal food, wine, warm clothing, a gentle treatment, &c. The preparations of iron are here found of the moſt eſſential ſervice. Much benefit has alſo been derived from weak fermented liquors—aceſcent cane-liquor has cured many.

"Perhaps there may be alſo a deficiency of carbon. I am inclined to think that the lungs have a greater ſhare in ſeparating oxygen than the ſtomach

stomach and alimentary canal; but from the mutual sympathy which subsists between the stomach and lungs, the vigorous exertion of the former is required to enable the lungs to perform their peculiar action. I conceive, that to produce scurvy, the abstraction of the usual stimuli, as in the disease, the history of which I have just now given, will be sufficient.

"It is remarkable that negroes, subject to this disease, have been much benefited by living in a low situation, near marshes, which quickly prove fatal to whites; and I have long observed this, before I had formed any theory upon the subject. Perhaps the hydro-carbonic air may act as a cordial—it is perhaps the nervous ether itself. It has been remarked by medical writers, that the attack of remittent marsh fevers is frequently preceded by an unusual flow of spirits."

A Case of Epilepsy, treated by Argentum Nitratum.

The following case has been communicated to the Editors of the Medical Repository, by Dr. J. E. White, of Waynesborough, in Georgia; and as the subject of epilepsy has already engaged the attention of our readers, in the second and sixth Numbers of this work, we do not hesitate to insert it.

"The patient," says Dr. White, "was a boy aged six years. He had laboured under the disease from the time he was eighteen months old. The fits occurred most frequently in the night, generally to the number of four or five; but he has been known to have sixteen in that space of time. He rarely passed a night without having more or less, except once, for about two months, when they entirely ceased; but they seldom recurred during the day. Various remedies had unsuccessfully been tried, and the fits had now become worse than ever they had been known, returning very frequently, both night and day.

"I was applied to, and thought it a fair case for giving the nitrated silver: I accordingly directed it in the following manner:

℞ Argent. nitrat.
Medull. pan. aa. sem. drachm. and divide into thirty pills; one to be taken night and morning.

"After he had taken four of the pills, the dose was increased to three in the day, (one being taken at noon) without producing any sensible effect. He had continued their use but four days, before the fits seemed to be suddenly arrested in their progress towards a fatal termination, and he remained entirely free from them for nearly two weeks. He had now a very slight return of them, and I ordered five pills to be given in the day. This dose was continued for a short time, when I increased the quantity of the argentum nitratum in each pill, to one grain and a half, of which he took four in the twenty-four hours, for a few days, (still remaining entirely clear of his complaint) when he was seized with the fever of this climate, which, from inattention, quickly put a period to his existence.

"Though it cannot be determined what would have been the issue of this case, yet, in my opinion, the most unequivocal proofs were given of the good effects of the medicine, and I shall not fail, in future, to make trial of it in cases that I may deem proper for its exhibition."

Observations on the Nature and Cure of Hydrophobia.

The Medical works of Dr. Rush, of Philadelphia, are too well known and esteemed, both in Europe and America, to require any additional commendation. This original writer has lately published the fifth volume of his

"Medical

"*Medical Inquiries and Observations*," from which we have selected the following article: and as we find a concise and satisfactory view of it given by the Editors of the "*Medical Repository*," in their fourth Number of the second volume, we do not hesitate to avail ourselves of their well-executed labours.

The exertions of physicians to lessen the number of incurable diseases form a splendid part of the modern history of medicine. Success has not always crowned the endeavours directed towards this object; but no effort has been wholly lost; and the improvements made, in many instances, have been such as might be sufficient to incite even the most tardy in this career of usefulness.

The terrors of hydrophobia have long held possession of the minds of men. Few instances of the successful treatment of it are to be found upon record, and even these few are supposed by many to be of dubious authority. Our learned author, therefore, has not declined any difficulty in selecting the subject of these observations.

Dr. Rush assigns the following as some of the remote and exciting causes of hydrophobia: the bite of a rabid animal—cold night air—a wound in a tendinous part—putrid and impure animal food—worms, &c. And the theory of the disease, which an examination of its causes, symptoms, and accidental cures, has led him to adopt, is, that it is a *malignant state of fever*. He is induced to think so from the febrile nature of the disease in all rabid animals—from its prevalence as an epizootic, at the same time that malignant fevers are epidemic—from the resemblance between the symptoms of canine madness and malignant fevers—and from the appearances of the bodies of dogs dead of the disease, as discovered by dissection.

Dr. Rush concludes, that the disease produced in the human body, by the bite of a rabid animal, is of the nature of a malignant fever—from its symptoms—from its appearing, like a malignant fever, at different intervals after the time of receiving the infection—from the similiarity of the appearances of the blood, when drawn in both cases—from the agreement of the diseases in point of duration—from the equally rapid putrefaction of bodies dead of either disease—and from the sameness of appearances in the dead bodies upon dissection.

The remedies for hydrophobia are divided by our author into two kinds: 1. Such as are proper to prevent the disease, after the infection of the rabid animal is received into the body. 2. Such as are proper to cure it when formed. Under the former head of remedies, he mentions cutting or burning out the wounded part—long and frequent affusion of water—and keeping the wound open and running for several months. He recommends low diet as a means of prevention, and supporting the spirits and confidence of the patient; but he does not rely upon mercury for this purpose, as the disease has been known to come on, notwithstanding a salivation.

As soon as the disease is discovered, Dr. Rush urges the use of blood-letting as the principal remedy, and advises that the quantity drawn be very copious. Many instances are adduced of the bold employment of this remedy with success. Besides blood-letting he recommends purges and clysters, sweating, and salivation by mercury. He also mentions cases where musk and opium, bark and wine, have been found efficacious remedies. Blisters and stimulating cataplasms, he supposes, may be useful in the decline of this disease, as they are in that of malignant fevers. The cold bath, also long immersion in cold water, have produced beneficial effects.

The analogy between hydrophobia and malignant fevers, which is so ably supported by Dr. Rush in these observations, seems to be founded upon a just

a just survey of the action of poisons upon the animal system. However various the substances called poisons may be, in respect either of their constitution or the effects they may occasionally produce, we are well persuaded they all hold many principles in common, and that a multitude of them attack animal life in a mode essentially the same.

On the Use of the Digitalis in Dropsy, Consumption, &c. *

From a letter addressed to us by Dr. SHERWEN of Enfield, Middlesex, dated August 8, 1799, we extract the following particulars:

" The favourable report which has been given of the effect of the *Digitalis Purpurea*, in the *Cure of Consumption*, has already excited, and will doubtless, still more excite, the attention of the faculty. I wish it may not also induce the public at large to make too free with that poisonous plant.

" The good effects of digitalis in the cure of dropsy, are now well known; and I believe there are few medical men ignorant of the fatal effects which it is also capable of producing, and which it frequently has produced, even when administered under the direction of very skilful practitioners. It is a duty therefore incumbent upon those who are endeavouring so meritoriously to *revive* the reputation of digitalis, to unite their encomiums with proper cautions respecting those insidious and deleterious properties of this plant, which have doubtless been the reason why it fell into disuse during the greatest part of the present century.

" That there is nothing new under the sun, is an old adage, not badly exemplified upon the present occasion; for the following encomiums upon the anti-phthisical virtues of digitalis may be read in " SALMON's *Botanologia*, or *British Herbal*," a large folio volume, published about one hundred years since.

" It is a specific which transcends all other vegetable medicaments for the " cure of consumptions; cleansing and healing after an admirable manner " ulcers of the lungs. It opens the obstructions of all the viscera, cleanses, " carries off, or expels the recrements of the humours, by which means " the daily nutriment may be conveyed to all the parts of the body. " The syrup or rob of the juice of the herb and flowers, made with honey, " may be given morning and night, four or five spoonsful at a time, accord- " ing to age or strength of the patient. Some advise three spoonsful to be " taken in mead, in the morning fasting, as much at ten in the morning, " three spoonsful at four in the afternoon, and lastly, as much going to bed. " This medicament has restored (where the patient has not been absolutely " past cure), beyond all expectation. It cures a phthisick or ulceration of " the lungs, when all other medicines have failed, and the sick been " esteemed past cure. It opens the breast and lungs, frees them from " tough phlegm, cleanses the ulcer, and heals it, where all other remedies " act without effect. I have known it do wonders, and speak here from " a long experience. Persons in deep consumptions, and given over by all " physicians, have, by the use of this syrup, or rob, been strangely reco- " vered, and so perfectly restored as to grow fat again. I commend it as a " secret, and it ought to be kept as a treasure. I am very confident of it; " the deplorable wasted patients who have been long languishing in an inve- " terate

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* On this subject we have already inserted, in a former part of this Number, p. 113 and foll. an interesting paper communicated to us by Dr. MACLEAN, to which we beg leave to refer our readers.

"terate and tedious consumption, or a phthisis, if they make use hereof, "will give me thanks for this notice, whilst they may have reason enough "to curse even the memories of quacking blood-suckers, issue makers, and "blister-drawers, who, as they may have possibly drained them of a fair "part of their estate and treasures, would, by a continuance under their "hands (for all their specious methods of cure) have fooled them out of "their lives too. But here it is to be noted, that this syrup ought chiefly "or only to be made of the flowers."*

"Very little is mentioned by Salmon of its virtue in the cure of dropsy: he says indeed, in a general way, that it is "*abstersive, emetic, cathartic*," that it "cleanses and purges the body both upwards and downwards, freeing it both from viscous and *watery* humours." He also adds a caution, "that it ought not to be given in too great quantity, because of its *violent* operation;" but he appears to be a perfect stranger to all the nervous distress and deadly influence over the vital principle which it sometimes produces, entirely independent of its evacuating powers. Although he was unacquainted with this part of its character, he speaks positively of its good effects in the cure of epilepsy, "and by late experience" (he says) "it "has been found effectual against the falling sickness, for that divers have "been absolutely cured thereby."

"When, to the popular encomiums of Salmon at the commencement, we add those of the late Doctor ALSTON, of Edinburgh, about the middle of the present century, it is I think fair to conclude, that an herb, the virtues of which were so generally known, could not have fallen into disuse but for good reasons: and although these have not been assigned by any of the older medical authors, from what we now know of its deleterious nature, there can be no doubt but numbers must have been injured by it; and I think we have every reason to expect that the same will be the case again; as the public are ready to catch eagerly at every new remedy for consumption; particularly when recommended by men deservedly high in their esteem.

"The above, together with the modern encomiums, afford satisfactory evidence, that the digitalis is a valuable remedy; and since we are now well acquainted with its poisonous properties, there can be no doubt but in the hands of prudent and attentive practitioners, it will be a valuable addition to the modern Materia Medica, in the treatment of consumption, as well as dropsy; and it must be added, that the assertion of Salmon (although he was never an author of merit or reputation †) respecting its salutary influence on *epilepsy*, deserves the most serious attention ‡. The fashion

* Obsolete as Salmon's Botanologia is, this extract from it was submitted to my opinion by a lady who was preparing it for her friend in the last stage of consumption: I am persuaded that the modern encomiums of digitalis were not known to the friend who sent it her. I. S.

† A pleasant anecdote is told of an Auctioneer who had the sale of some books, one of which, a work of SALMON's, had been in the possession of Dr. RADCLIFFE. This the auctioneer puffed most violently, as a work of the *ingenious* and learned Dr. William Salmon, with marginal manuscript Annotations by Dr. Radcliffe. This excited attention, as the great Doctor Ratcliffe had never been known to have *written* any medical observations, and the book sold at a high price. When the purchaser came to examine his treasure, the hand-writing was certainly that of the Doctor, and to the following effect: 'This is the most cursed stupid book that ever was published." —"ignorant blockhead"—"booby"—"jack-ass" &c. &c.

‡ Admitting the facts, which perhaps there can be no good reason to doubt, may not the good effect of the digitalis in this instance also depend on its property of exciting absorption or promoting a free discharge of urine. There is some reason to believe that epilepsy may often depend on an over-proportion of water or lymph in the ventricles of the brain, without its amounting to actual hydrocephalus.

faſhion of the day, and the high authority of the College * tend ſo much to encourage the uſe of poiſons, that there can be no doubt but the digitalis will be very generally preſcribed by profeſſional men, and I ſincerely wiſh its adminiſtration may remain in their hands.

"The theory of retarding the circulation for weeks together, has a very promiſing ſound, reſpecting ſome of the ſymptoms and circumſtances connected with phthiſis pulmonalis; but the digitalis could never have been preſcribed with that view by Salmon and his contemporaries. Perhaps the ſalutary effects of this medicine in conſumptive caſes may, in ſome inſtances, be referred entirely to its diuretic property: ſerous effuſion into the cavity of the thorax is a very common conſequence of active inflammation in the lungs; emaciation, cough, night-ſweats, hectic fever, and copious expectoration of mucus of a purulent appearance, may, and often do, follow inflammation in the lungs, where neither abſceſs nor ulceration has taken place; and it is eaſy to conceive that all theſe ſymptoms may be combined with hydrops pectoris; and that a patient, gradually ſinking under their combined influence, may have been ſpeedily reſtored to health, by the adminiſtration of a medicine capable of producing ſuch happy effects as we now frequently witneſs in the moſt dangerous ſymptom, the hydropic oppreſſion; that being removed, all the other appearances of phthiſis pulmonalis would gradually ſubſide, and the digitalis acquire the reputation of curing a conſumption which had never exiſted.

"I am afraid that a greater number of facts, and more experience muſt be brought forward, before we can adminiſter it with much confidence in the true ſcrophulous conſumption. It is, however, worthy of remark, that Salmon in his ſpecification of its virtues ſays, "it cures conſumption, *king's* "*evil*, green ſickneſs, and falling ſickneſs, alſo wounds, old ſores, and run- "ning ulcers." Hence it is evident, that he conſidered it as uſeful in ſcrophula; and we have reaſon to ſuppoſe that his obſervations and encomiums are the reſult of *experience*; becauſe he appears to have known very little of its virtues, when he wrote his "*New London Diſpenſatory*, with Remarks," the imprimatur of which bears date thirty years antecedent to the "Botanologia."

Miſcellaneous Facts and Remarks.

FROM a letter of Dr. L. MACLEAN, dated Sudbury, Auguſt 18th, we extract the following paſſages, relative to the uſe of the *fox-glove*, as connected with his paper, inſerted p. 113, and fol.

"As I perceive your ingenious correſpondent Dr. MOSSMAN, appears deſirous of giving the fox-glove a fair trial in conſumption, I truſt I may be ſuffered to preſume on the experience I have had of this medicine in pulmonary affections, by aſſuring him he is not likely to be ſucceſsful while he continues to preſcribe it as he now does. In one caſe he directs gr. j. to be adminiſtered every two hours. Now, as this quantity of the powder of

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* Noſtris temporibus alia est, et longe dissimilis *venenorum* fortuna; neque enim ab iis, tanquam prorsus inimicis, abhorrere videtur medicina, sed ea ad partes suas traducere, et opem eorum sociam et adjutricem exposcere."

Pharmacop. Coll. Reg. Medic. Lond.

of the genuine leaves, prepared as directed in the abstract lately transmitted to you, would, in less than twenty-four hours, produce in most habits very powerful effects, I am induced to infer, that instead of the active fox-glove, his patients were using the inert powder of half-decayed leaves, a circumstance I have repeatedly experienced when I first began to prescribe it. This I am persuaded has been the case with many practitioners, and must frequently happen, without the strictest attention to the mode of preparing it.

"It is only by the most gradual exhibition of the medicine, and by keeping the habit for some weeks under its influence, that any permanent advantage is to be derived in the worst cases of phthisis; and gr. j. of the powder, or from fifteen to twenty-five drops of the tinctures of which I have given formulas, taken morning, noon, and night, will in general be found sufficient to do this.

"In the case of a young woman now under my care, of confirmed hereditary consumption, twenty-nine drops of the tincture have been taken, *ter in dies*, but she has been for some days so much under its dominion, that I judged it prudent yesterday to lessen the dose to twenty drops. The pulse has never been reduced lower than 120, but one day when it was 112 in a minute, although she has been taking it for upwards of a fortnight, and it was increased in the most gradual manner. No advantage has as yet been obvious, nor am I very sanguine. Pray have the goodness to add, after the formula I have given of the infusion, "a table-spoonful of which, taken three times a day, is a full dose for an adult to begin with."

The American continent in general, and the United States in particular, are very much engaged in ascertaining the real causes of their epidemic diseases, and the best means of preventing them. The Transatlantic Journals contain many ingenious and instructive papers on this subject; especially those relative to Dr. MITCHILL's theory of the *septic acid*, which at present appears to be by far the most prevalent. Although these subjects are of the first importance to the practitioner in warm climates, we are inclined to believe, that the articles we have selected, will be equally interesting and useful to all medical readers.

Dr. RUSH mentions in the fifth volume of his "*Medical Inquiries and Observations*," a striking illustration of the *good effects* of *depletion*, as a preparative in strangers, to encounter the dangers of a baneful climate, in a communication from Dr. BORLAND, one of the physicians of the British military hospitals in the West-Indies.

"In the beginning of August, 1797, 109 Dutch artillery-men arrived at Port-au-Prince, in the Bangalore transport. The florid appearance of the men, their heavy, cumbersome cloathing, and the season of the year, seemed all unfavourable omens of the melancholy fate, we presumed, awaited them. It was, however, thought a favourable opportunity by Dr. JACKSON and myself, to try what could be done in warding off the fever. It was accordingly suggested to M. CONTURIER, the chief surgeon of the foreign troops, and the surgeon of the regiment, that the whole detachment should be blooded freely, and that on the subsequent morning a dose of physic should be administered to every man. This was implicitly complied with in a day or two after; and at this moment in which I write, although a period of four months has elapsed, only two of that detachment have died, one of whom was in a dangerous state when he landed. A success

succefs unparalleled during the war in St. Domingo. It is true, feveral have been attacked with the difeafe, but in thefe the fymptoms were lefs violent, and readily fubfided by the early ufe of the lancet. The crew of the Bangalore, on her arrival at Port au-Prince, confifted of twenty-eight men. With them no preventive plan was followed: in a very few weeks eight died; and at prefent, of the original number only fourteen remain.

"It is curious to notice, in connection with the above narrative, a fact quoted by Dr. Rufh, from Dr. M'Kitterick, that the heat of the body in ftrangers, newly arrived in the Weft-Indies, has been found to be between three and four degrees above that of the temperature of the natives. How far fuch depletion, as that practifed in the cafe of the Dutch artillery at St. Domingo, might be ufeful at the beginning of an epidemic feafon in the United States, may be left to the decifion of future experience."—*Medical Repofitory*, Vol. II. p. 190.

Dr. Williamson, of New-York, after having ftated feveral inftances, proving the *ill effects of blood-letting in putrid bilious fevers*, and *pneumonia typhoides*, as they appear in North-Carolina; and after obferving that he did not hear, during a whole winter feafon, of a fingle cafe of a patient recovering who had been freely bled, concludes with the following judicious remarks:

"As the patients," fays Dr. Williamfon, "who fuffer by the complaint are commonly men, not often women, and as men expofe themfelves much more imprudently than women to the cold and to the rain, there is reafon to believe, that a checked perfpiration is the proximate caufe of the complaint. Any fever, thus induced, where the fluids are diffolved, and in fuch a ftate of the atmofphere as has been mentioned, muft foon be expected to put on a dangerous appearance. I have known a man, thus prepared by intermittents, in the feafon and country mentioned, bring on by dancing, what was called a pleurify in his head, and die in forty-eight hours.

"I was affured by Dr. Sawyer, a phyfician in Pafquetank, about thirty miles from Edenton, that he was called to many patients in the winter of 1792. They complained of a pain in the fide, and a high fever. He feldom waited, as he declared, even for a remiffion: he gave the bark in fubftance, and his patients recovered. Having bufinefs in Pafquetank, I inquired concerning the general progrefs of the fever during that fickly feafon. I was affured by a gentleman there, whom Dr. Sawyer had attended, that having a high fever and confiderable pain, he took the bark in fubftance, and thought that his fever moderated by every dofe. He faid that one of his flaves had been treated in the fame manner, with a fimilar effect. He added, that another phyfician in the fame vicinity, a man of talents, and well-educated, adhering to the bleeding fyftem, while the pain and fever remained, had loft the moft of his patients.

"Whatever fuccefs may have attended the practice mentioned, I think the indifcriminate and immediate ufe of the bark muft be exceptionable and hazardous. I am neverthelefs perfuaded, by all the obfervations I have made on this fubject, that the lancet fhould feldom be ufed in the brumal fevers, which often appear in the low country in Carolina; but it is a remedy commonly at hand—it promifes immediate relief to a perfon in pain; thefe circumftances appear to have kept it too long in ufe. *Ibid.* pp. 156—159.

Mr. Daniel D. Walters, apothecary, in New-York, relates of himfelf the following cafe of the *dyfenteric effects of nitrous acid* taken into the

the stomach. He had exercised himself considerably on a day, near the end of April, 1798, and had become thirsty; entering his shop in this situation, he took a large bottle which he supposed to contain water, applied it to his mouth, and drank heartily; immediately after swallowing the last mouthful, he was sensible of a sourish, disagreeable taste, and on inquiry found that his apprentice, instead of putting the water for drinking into the usual bottle, had poured it into another bottle of the same material, size, and capacity, standing beside it: neither of them being marked or lettered, and the bottle into which the water, by mistake, had been poured, was the one in which aqua-fortis had been kept, and not completely poured out. The liquid he swallowed was therefore a diluted aqua-fortis. Within a few minutes a deadly and intolerable nausea came on, which, within a quarter of an hour, ended in vomiting. After this he felt better for some time, when pain, griping, and flatus succeeded, and about fifteen hours after taking the dose, tenesmus and bloody stools followed; these latter symptoms were attended with head-ach and fever; the dysentery lasted two days, and gradually went off, no medicine having been taken.

The brother of Mr. Walter, who drank of the same acidulated water, was also excessively incommoded by it, and placed in extreme danger. *Ibid.* pp. 337 and 338.

Dr. MITCHILL, of New-York, has lately addressed a letter to Sir JOHN SINCLAIR, *on the affinities and relations of septic* (nitric), *or pestilential fluids to other bodies*; intended as an additional article to the proposed Report of the British Board of Agriculture, on the subject of manures—from which we extract the following curious passages:

" While I was engaged," says Dr. Mitchill, " in investigating the manner in which pestilential fluids exerted their powers on the human body, and just after I had arranged the materials of my letter to Mr. HAVENS, an occurrence of a kind novel to myself befel a man in the Infirmary of New York. Being then in attendance as a physician, I was requested to take under my charge one of the patients in the surgeon's ward, who had for several days before been seized with an intermitting fever, and severely handled by it. On inquiring into the particulars of his indisposition, I found the complaint for which he had been admitted into the house was an ulcerated leg. This, for some time, had been dressed with the red precipitate (septite of quicksilver), in such large quantities, that when at the customary time the surgeon's assistant renewed the dressings, the bottom and sides of the sore were frequently covered with it, in its undecomposed state. Such a long-continued and plentiful application of the escharotic seemed to have afforded septic (nitric) acid enough, to be absorbed into the vessels, and apparently to produce considerable effects on the constitution. To this interpretation of the disease I called the attention of the bystanders, and the circumstance of the ulcer, with the febrile symptoms, had so much of the probability of cause and effect, that we were generally of opinion, the feverish commotion might have been stirred up by the acid absorbed, after its disengagement from the mercury.

" Some precious remarks on the fixation of the septous (nitrous) vapours of manures by earthy substances, are to be found in SCANDELLA's letter to ARDUINO *. The author's observations, which were made for the Venetian territories, apply with great force to New-York, whose southern part is nearly

* See Outlines of the 15th Chapter of the General Report, &c. Addend. p. 12.

nearly the same parallel of latitude with the north of Italy. Scandella considers putrid diseases in the southern parts of Europe, if not originating from the septic exhalations of dunghills and heaps of manure as their only cause, as certainly rendered more dangerous by them. He observes that they "may be looked upon as not far dissimilar from marsh-miasmata, and may "afford a fomes to periodical fevers." And in manufacturing manure in hot climates, he gives particular cautions against the putrid exhalations which it emits.

"The people of Great Britain may imagine themselves secure from the noxious effect of these pestilential steams; but I have a confidence, if the matter was properly inquired into, they would find not only their jail, and ship, and hospital fevers originating from this effluvium, but that among their poor peasantry and manufacturers, though it is not concentrated enough to cause the high-wrought forms of febrile ailments in America, yet their typhus, in all its gradations, is fairly to be ascribed to the more feeble and gradual operation of these septic (nitric) vapours.

"This kind of compound seems also to have been *almost* expressed by DARWIN (*Zoonomia.* vol. I. sect. xxviii. 2.), where the *hectic fever* supervening, by admitting air to an ulcerated surface, on opening an abscess, is ascribed by that elegant and original philosopher, to the *azotic,* rather than the oxygenous portion of the atmosphere; though he appears since to have changed it to the *oxygen,* in which he has probably not bettered his judgment; the preferable opinion being, that they are *both* instrumental in stirring up febrile commotion in the system, by forming a septic fluid, producing, with an allowance for peculiarity on attendant circumstances, an effect analogous to the patient whose case I related in the beginning of this letter.

"It surprises me, in looking into SCHMEISSER's edition of VON USLAR's Observations on Plants, that so little is said concerning the operation of the *septic* principle (azote) on the vegetable economy; but septon (azote), so long overlooked, will probably attract more attention for the future." *Ibid.* pp. 345—353.

DR. NOOTH, Superintendant-General of the hospitals in British America, in a letter to Dr. Mitchill, dated Quebec, Jan. 24, 1799, gives the following opinion respecting the *treatment of dysenteries, and other autumnal diseases:*—"I can assure you," says he, "I am almost convinced of the truth of your doctrine with regard to azote, or septon, as the cause of those epidemic diseases which generally make their appearance toward the end of summer, in warm countries. There are some observations which I have made in my own practice, that lead me to suppose, there may be *something of an acid nature,* that may act as an exciting cause in the dysentery and yellow fever, and indeed in many other diseases that arise from heat and other circumstances, in the latter months of the warm season.

"Having unfortunately seen, in the course of my practice, a great number of dysenteric cases, and having experienced the inefficacy, in general, of the usual mode of practice, I was induced to try the effects of the several purgatives now in use, with the view of ascertaining how far any one was preferable to the others, in the treatment of dysenteric patients. Experience soon taught me, that the *tartarum solubile* (neutralized tartarit of potass) was the most salutary in its effects; and of course, I have always, since that discovery, had recourse to it in dysenteries and other autumnal diseases; and, I can assure you, with the greatest success, both in children and adults. The component parts of that neutral (acid of tartar and potass), and

and the advantages attending its use in the cases above alluded to, seem to confirm your doctrine, and induce me to believe your theory is better founded than the world will, perhaps, at first allow. *Ibid.* p. 437.

Under this head of our Journal we wish, at present, to revive in the memory of our readers, the *alexipharmic powers of pure ammonia*, or caustic vegetable alkali, in the cure of persons bitten by snakes in hot climates. The dose is sixty drops in a sufficient quantity of water, taken internally, till the symptoms abate. The wound ought also to be washed with the same solution. This treatment has always been attended with success, when the patient was able to swallow the medicine.

Dr. Richter, of Göttingen, has lately described a particular species of dropsy, in a very interesting and useful work, entitled "Medical and Chirurgical Observations," page 268, of the original German; a faithful English translation of which appeared in 1794, by Dr. Spens, of Edinburgh. As this work is little known among our medical friends in this country, we presume to repeat, that Dr. Richter derives the *hydrops vagus*, or the vagrant dropsy, from a spasmodic state of the lymphatic system, arising from any particular stimulus. This may be either of a gastric, bilious, rheumatic, arthritic, venereal, or any other kind, so that it may affect any part, or organ of the body, exclusively. This theory appears to be perfectly consonant to nature, and to explain many pathological and therapeutical difficulties, especially to those who are accustomed to treat all dropsical complaints indiscriminately with diuretic remedies.

Prof. Hecker, of Erfut, is so much convinced of the truth of this hypothesis, that he has illustrated it with a remarkable instance communicated to the Editors of the "*Journal der Erfindungen,*" who have given it a place in their tenth Number. As our limits do not admit of relating this case at full length, we shall only remark that the learned Professor explains the cause of that disease in his patient, from the irritable and spasmodic state of the whole system; from the peculiar stimulus which first produced gastric symptoms, preternatural sensibility of the stomach, pain in the side, fever, and afterwards the hydrops vagus. The good effects of antispasmodic remedies likewise appear to confirm the ætiology of Dr. Richter, in a great variety of dropsical cases: nor does either of these learned writers maintain, that spasms are the *only* cause of *all* dropsies.

Another important fact tending to corroborate this theory, we find in the last volume of "New Observations and Facts, 1795," by the venerable Theden, Surgeon-General to the Prussian armies. He recommends, from long experience, in dropsical cases after quartan agues, the use of the belladonna, the leaves of which afford the best and most effectual remedy. It is scarcely possible to conceive any other effect from this medicine, than that of removing or suppressing the irritable state of the nervous system, of which dropsy frequently is the consequence.

In the opinion of Prof. Hecker, even the *digitalis* (which is perhaps too generally prescribed in dropsy) appears to possess no specifically diuretic virtues. This medicine obviously diminishes irritability, so that *the pulse becomes slower*, while it moderates tensions and spasms. Its resolvent and diuretic powers, therefore, must be ascribed chiefly to those effects. Hence it will most probably effect a cure in spasmodic dropsy, but prove of no service in that arising from other causes: and thus we may account for the contradictory opinions which have hitherto prevailed respecting the efficacy of this medicine.

MEDICAL

MEDICAL AND PHYSICAL

INTELLIGENCE,

(Original and Selected.)

As the subjects generally introduced in this department of our Journal have only a distant relation to the practice of the Medical Art, while they consist chiefly of miscellaneous articles, tending in some degree to mark the scientific progress in the AUXILIARY BRANCHES OF PHYSIC, *we shall not hesitate to communicate to our readers any information transmitted by correspondents, who wish to aid our efforts, in attaining that desirable purpose.*

FROM a very ingenious and elaborate paper, originally written by Dr. MITCHILL of New York, and addressed to Dr. HOPE, the present Professor of Chemistry in the University of Edinburgh, *on the application of the doctrine of septic fluids, to explain some of the diseases of human teeth and bones,* we shall, under this head of our Journal, extract the part of Dr. Mitchill's disquisition, together with his experiments, relative to some of the morbid changes which the teeth and bones of animals undergo in the progress of life.

Dr. Mitchill aims at a scientific explanation of some of the alterations which bones suffer by disease; as the writers on surgery have scarcely ventured upon this inquiry. What he has aimed at in this respect is, to connect the facts related by the late Mr. HUNTER, of London, with those detailed by Mr. RUSSELL, of Edinburgh, by means of certain experiments and observations of his own. From the known disposition of oxygen to combine with septon, and from the septic acid, it appeared probable to Dr. Mitchill, that it would be formed occasionally in the human mouth, from the remains of food adhering to the teeth, settling between them, and corrupting there, If this were the case, this acid ought to unite with the calcareous earth of the teeth, and form the septite of lime, which might be washed away by the saliva, or possibly in some instances concrete upon the teeth themselves; and, if formed there, the acid might be expected to corrode the enamel, lay bare the bony part, and bring on a caries; or to incrust the outside, irritate the gums, and occasion soreness and bleedings.

In order to determine whether these effects actually took place, Dr. Mitchill procured from a dentist a quantity of the substance called the "tartar of the teeth," which he supposed might contain some septite of lime, and subjected it to a number of experiments.

Having some time before received complaints from the merchants of Glasgow, of the inferior quality of the pot-ash and pearl-ash supplied from the port of New-York, and having been requested by the President of the Chamber of Commerce to visit with him the stores of the inspectors of those articles in the latter city, he had collected specimens of both, of the first qualities, with a view of making some experiments.

These salts, being in their caustic state, had been placed in separate glasses, to attract water and carbonic acid from the atmosphere; and after standing

ſtanding ſeveral months, the ferruginous and earthy parts having ſubſided, beautiful cryſtals of the alkali were formed at the bottom of the liquor.

A ſolution of theſe cryſtals was made in water that had been boiled ſome time, to extricate its air, and precipitate ſome of its earth; and to this ſolution of pot-aſh, was added a parcel of the yellowiſh, earthy matter ſcraped from human teeth, which had been previouſly reduced to powder in a mortar.

Inſtantly on mixing them, bubbles of air were ſet looſe, and thickly floated on the ſurface of the mixture; and, by their long continuance without burſting, ſeemed to indicate a ſort of tenacity in the fluid, derived probably, from animal mucilage. The coarſer part of the earthy matter ſoon ſunk to the bottom, but the finer particles took a long time to ſettle; yet in a few minutes, even before the liquor had become clear, a piece of clean paper, dipped in the ſolution, and dried before the fire, deflagrated on being burnt, and emitted numerous flaſhes and ſparkles, after the manner of ſalt-petre; while no ſuch lucid or radiant appearance was evident on ſetting fire to paper that had been dried, after dipping it in a ſolution of the alkali alone.

It is not unworthy of remark, that the ſmell of the mixture was offenſive and nauſeous, reſembling, as much as any thing, the diſagreeable odour of ditch and puddle-water. On repeating the experiment ſeveral times, and in the preſence of ſeveral perſons, the abovementioned appearances were, with trifling variations, ſimilar.

The object of inquiry having been leſs to make an entire analyſis of the lapis dentalis, or "tartar of the teeth," than to aſcertain whether it contained any *ſeptic* acid, the author was ſatisfied with the perſuaſion, that the queſtion is determined in the affirmative, *by the union of the ſeptic acid of the tartar* (which ſeemed to conſiſt partly of nitrat of lime, combined with animal mucus, &c.) *with the alkali of the mixture into nitre, which deflagrated on being ſubjected to the operation of fire, with the paper to which it had attached itſelf.*

In order to apply this principle, it muſt be underſtood what the component parts of the teeth are. SCHEELE and GAHN ſeem, as long ago as 1776, to have ſucceeded in obtaining phoſphoric acid from the bones of animals, by employing ſeptous (nitrous) acid, which diſſolved their lime, and conſtituted with it calcareous nitre, while the phoſphoric acid was ſet free. More recently, BERNIARD (*Journal de Phyſique, Octobre,* 1781) obtained phoſphoric acid not only from foſſil bones, from thoſe of the whale and ſea-horſe, but from the tooth of the manati, and the grinder of the elephant. It has alſo been extracted from ivory.

In ſhort, thoſe who experimentally attended to this ſubject, have agreed, that animal *bones* are chiefly compoſed of phoſphoric acid and calcareous earth, or are phoſphats of lime, and that their *teeth* conſiſt principally of the like materials. Septic acid, therefore, formed in the mouth, decompounds teeth upon the ſame principle that, in the experiments of the Swediſh chemiſts, it diſorganized bone; that is, by detaching the phoſphoric acid from the lime, and combining itſelf with that earthy baſis.

HUNTER (*Natural Hiſtory of Human Teeth*, p. 125.) has an idea that the concretions on the teeth reſemble the inteſtinal balls and bezoars found in the bowels of many animals—and this opinion is probably very juſt; but, perhaps, leſs juſt is his other idea, that theſe extraneous matters conſiſt merely of "earth and the common ſecreted mucus." (*Diſeaſes of the Teeth*, p. 66.) He informs us, that he has ſeen ſuch earthy depoſitions "cover not only the whole tooth, but a part of the gums: in this caſe, there is always an

an accumulation of a very *putrid* matter, and frequently a considerable tenderness and ulceration of the gums, &c."

The destruction of the enamel and bony part of the tooth, the rottenness of the alveolar processes, the ulceration, absorption, and bleeding of the gums, and the fetid breath, seem to arise occasionally from the same general cause.

After investigating the order of the chemical elective attraction subsisting between phosphoric acid, one of the constituent parts of the teeth, and other bones—and between lime, the other ingredient, and the substances with which it has a disposition to combine, Dr. Mitchill enters upon an extensive inquiry into the vital economy or animated structure of these parts.—The whole is interspersed with judicious and original remarks, accompanied with a variety of appropriate quotations from the ancient classics. But as the limits of our Journal will not admit of extending this article, we propose to resume the subject in the next Number.

Cit. BRUGNATELLI remarks that, in consequence of the rejection of GOETTLING'S theory, he is obliged to withdraw the term *foxygen*, which he had lately given to the *azote* of the French chemists; and, instead of these, he proposes the word *septon*, derived from the Greek, and signifying putrid. This denomination was originally suggested by M. SALTONSTALL, and expresses, in the opinion of Brugnatelli, the essential property of azote, namely that of being the principal agent in the process of putrefaction.—The nitric acid therefore will, conformably to this change, be called by the name of *oxyseptonic*; the nitrates by that of *oxyseptonates*, &c. The author farther proposes to place the nitric acid among the productions of the animal kingdom. The French editors observe, on this occasion, to the learned Professor of Pavia, that it would now be rather a difficult attempt to maintain that division of chemical bodies into classes, according to the kingdoms of Nature.—*Annales de Chimie*, No. 86.

The same author communicates a method of preparing a solid gold of the finest quality, which perhaps is not unworthy the attention of the chemist, though it may not lead to medical improvements.—A solution of the nitrat of tin is precipitated by liquid sulphat of potass; the precipitate is then dried, and put into a retort with the half of its weight of sulphur, and the fourth part of the muriat of ammonia: a sulphat of tin of the brightest colour is said to be formed at the bottom of the retort. *Ibid.*

VAN MONS, in a letter to Brugnatelli, gives the following account of some of his experiments on fulminating substances: "I am assured," says he, "that the oxyds of gold, precipitated by the oxyds of other metals, do not in themselves possess the property of fulminating; whence I conclude that some of those oxyds formed by alkalies, owe that property to the azote which is fixed in them, and which forms the combustible process (*fonction*), as is the case in the aurum fulminans. The oxyd of silver fulminates likewise with much greater force than that of gold. The grey oxyd of mercury, precipitated by ammonia, detonates by compression alone. *Ibid.*

M. MUSSIN wished to discover whether a mixture, consisting of sulphur and phosphorus, which continues in a liquid state at the temperature of the atmosphere, would not coagulate, if the proportion of the sulphur were increased. This mixture, at first, did not seem to disagree; the mass resem-

bled wax, and showed an inclination to rise to the surface of the water, when the bottle which the author held in his hand, flew into a thousand pieces. The bursting of the bottle was accompanied with a fulmination, which resembled the report of a pistol; and a sulphureous alkaline smell filled the laboratory. The contents of the bottle which were scattered on the ground, was not inflammable; but some drops of it, when put on a mirror and pressed with the finger, took fire. The author was preserved from injury only by the circumstance that the explosion happened in the direction towards the cieling; and he imagined that this accident must be attributed to the expansion of a particular gas, which he supposes to have been the phosphorated hydrogen gas combined with sulphureous gas. *Ibid.*

Cit. VAN MONS communicates the following observations relative to the preparation of the black oxyds of antimony and mercury (*æthiops antimonialis*) in the humid way.

Antimony, by its combination with sulphur, or crude antimony, very forcibly retains this combustible ingredient, though it be not sufficiently saturated to part with it by simple trituration with mercury. The extinction of this metal, which was supposed to take place in the sulphur, was, after an extremely tedious experiment, so far from being accomplished, that the result appeared to be a mixture consisting of the sulphur of antimony, and black oxyd of mercury united by air. QUARIN endeavoured to remedy this defective operation by adding sulphur to the matter subjected to trituration; but this improvement tended only to abridge the labour, and afforded a still more imperfect mixture of the two sulphurs of antimony and mercury.

Van Mons proposes to prepare the antimonial æthiops by precipitating the hydro-sulphureous alkali of the antimony with the nitrat of mercury. To compose this hydro-sulphur, twelve parts of the sulphur of crude antimony are boiled with six parts of caustic potash and three parts of sulphur, in a sufficient quantity of water. In these proportions of the ingredients, the sulphur which is formed does not occasion any precipitate on cooling. A portion of the liquid is filtered, and examined whether the alkali is saturated with the antimonial sulphur. This point being ascertained, the liquor should be precipitated in a very clear and gradual manner, by means of a solution of mercury in the nitric acid.

No hydrogenated sulphureous gas is disengaged during the precipitation, as the hydrogen is converted into water by the portion of oxygen which the mercury ought to discharge, in order to become a black oxyd, this being the only degree of oxydation in which it can unite with the sulphuric base to form sulphur.

The precipitate, when washed and dried, is black, lightly tinged with green. It might be admitted into pharmacy, under the denomination of *æthiops antimonial, in the humid way.* The physicians of these departments who have prescribed it, have assured the author, that its exhibition has been attended with the best effects. *Ibid.* No. 89.

The same author has, in a letter to KASTELEYN, on the *non-oxygenability of the sulphuric acid*, added the following facts in addition to those stated by VAUQUELIN and BOUVIER.

1. Twenty grains of the filings of zinc, dissolved in four ounces of sulphuric acid, were distilled over the oxyd of manganese, and sufficiently diluted. During the solution, hydrogenous gas was disengaged: If the acid

acid had been oxygenated, it would have imparted to the zinc its oxygen, some of which it required to dissolve it, and the water would not have been decomposed.

2. The same experiment made with iron instead of zinc, afforded a similar result.

3. Thirty grains of zinc, dissolved in three ounces of sulphuric acid, were digested over the oxyd of manganese, according to the instructions of GIOBERT. The solution in this instance took place without any disengagement of hydrogen gas; but the metal dispelled the oxygen from the oxyd of the dissolved manganese, and not from the supposed oxygenated acid; it being proved by the disappearance of the red rose colour, that the sulphuric acid owed its combination with a portion of the oxyd of manganese, to the maximum of oxydation.

4. The same experiment made with iron, produced a similar effect.

5. The nitric acid boiled with the sulphuric acid, did not oxygenate the latter.

From these experiments Van Mons has discovered how to prepare a liquor for artificial bleaching, which is remarkably cheap and easily procured. Three parts of muriatic acid must be digested over one part of the oxyd of manganese, in a glass retort closely stopped; after a sufficient digestion, the limpid part is poured off and precipitated with potass or soda, in order to separate that portion of the oxyd of manganese which is dissolved; the lye is then filtered, and the precipitated oxyd is added to that which is not dissolved, to wash and make them re-oxyde in the open air, by the medium of water. In this manner the same oxyd may continually serve for new operations, and contribute much to the cheapness of the process.

This oxygenated liquid always retains a purple colour, if it be not surcharged with alkali; and it greatly resembles faggot-lye (*lessive de javelle*). *Ibid.*

M. HILDEBRANDT has lately made some useful experiments *on the solution of mercury in the nitric acid,* of which the following is an abstract.

One hundred parts of concentrated nitric acid dissolved one hundred and twenty-five parts of mercury. The same acid, diluted with half its quantity of water, dissolved one hundred and ninety seven parts of the metal; but when diluted with equal parts of water, it did not dissolve more than one hundred and seventy, and if mixed with double its quantity of water, its solvent power was reduced to one hundred and fifty parts.

The crystalline form of the nitrat of mercury varies according to the circumstances in which the solution is made, whether in a low or high temperature, or if the acid is in a concentrated or weak state.

The nitrat of mercury uniformly deposits a portion of the white oxyd of that metal by its solution in water.

The nitrous solution of mercury forms crystals the moment it parts with its free or unsaturated acid.

The mercurial oxyds dissolve in a smaller quantity of the nitric acid than mercury in the metallic state.

The mercury is precipitated from its nitrous solution by the alkalies and caustic earths, in colours which differ according to the manner in which the solution has been made, or according to the state of oxydation in which it was dissolved.

Mercury and its different combinations offer a vast field to the inquiries and reflections of the chemist. M. Hildebrant has discovered by his experimental

rimental operations on this metal at least *three hundred new facts*, and yet remarks that he has scarcely begun its investigation. *Ibid.*

Van Mons has accidentally discovered a method of producing *a real white oxyd of mercury*, by precipitating the oxygenated muriat of mercury, formed by the mixture of the red oxyd of mercury, dissolved in the nitric acid by heat, with a solution of the muriat of soda. The precipitates which were formed by the first additions of alkali, disappeared almost as soon as they were separated; yet they were every time produced in great abundance. When the whole of the acid was saturated with ammonia, the precipitate became fixed; and its colour was of the finest white, and extremely light.

Neither the caustic, fixed, and volatile alkalies, nor lime, affected the colour of this precipitate: which only volatilised to a red colour, while it was reduced; it readily dissolved in the nitric and muriatic acids, &c. In short, it appeared to be a real oxyd of mercury, from the relation in which it stands to the alkalies and lime. *Ibid.*

Dr. Scherer, of Weimar, has, in a letter to Cit. Van Mons, given the following account relative to the *extraction of sugar from the beet-root.*

The celebrated Achard, director of the Physical Class in the Royal Academy of Berlin, has at length discovered a substitute for sugar in the beet-root (*beta vulgaris*, Linn. the *runkelrübe* of the Germans); a plant which has hitherto almost exclusively been used for feeding cattle. He took twenty-five roots in their rough state, weighing thirty-two pounds and a half, which, after having removed the outer rind, he bruised very small, and expressed their juice. The gross part remaining after this expression was again extracted by means of hot water, so that both liquids, when united, weighed fourteen pounds and three-quarters. The whole was then evaporated by slightly boiling it in a tin vessel, till it became of the consistence of honey. During this evaporation, the impurities which still remained in the juice, spontaneously separated, and there is no doubt that they were carried away by the coagulation of the albumen of the roots. The juice thus inspissated was then evaporated to dryness by a much milder heat. The result of this process was a mass easily reducible to a dry powder, of a light brown colour, which scarcely absorbed any moisture from the atmosphere, and which had a pure saccharine taste; its weight amounted to three pounds and three ounces: hence thirty-two pounds and a half of the root produced that quantity of raw sugar.

M. Achard then made an experiment by which he proved, that one pound of the root contained only twelve drachms, or at the utmost two ounces of mucilaginous parts; and it is to the small quantity of the latter ingredient that the easy separation of the saccharine matter must be attributed.

In order to ascertain the quantity of *pure* sugar contained in a given weight of inspissated juice, or *raw* sugar, a portion of the latter was subjected to a slow heat, with a sufficient quantity of alcohol, to dissolve the whole of the saccharine substance. This solution, when cold, was filtered and carefully evaporated: it yielded a very white and perfectly pure sugar. From the quantity thus obtained the following calculation resulted; namely, that by the ordinary process, eight pounds of the purest refined sugar were obtained from one hundred pounds of beet-root; consequently, that a piece of ground containing 180 square yards, which could produce 46,000 pounds of roots, ought to yield twenty-two quintals of raw sugar. By computing the produce

duce at four pounds of the root to each square foot of ground, a single German mile might produce 16,756 quintals and seventy pounds of the root, or 134,053 pounds of white refined sugar.

On this subject, Cit. VAN MONS has furnished us with the following commentary.

"The *runkelrübe* or *dick-wurzel* of the Germans is not the *beta vulgaris* of Linnæus, as it would appear from the remark of my friend, but is the *beta cicla* of that author. The specific character of the latter consists in its being tripetalous; while the former is polypetalous. The beta vulgaris has, according to Linnæus, no variety of white roots, as that from which Achard appears to have extracted his European sugar; but is only a red root of a greater or less size, a yellow and thick root, and a pale green and thick root. They are simply distinguished by the names of red beet-root, yellow beet-root, &c. The beta cicla is a white root with red leaves, or a white root with pale green leaves. The former is the true *runkelrübe*; and the latter is that species which the Swiss call *mangold*.

"The runkelrübe, or the variety of the beta cicla, with leaves of a red colour, or pervaded by red veins, is the ground or field beet-root, which grows abundantly, but is very scarce in France. The English call it *turlip*, whence no doubt the name of turnips has originated, which has been mentioned in the news-papers as a discovery of Achard, so that they have confounded it with the thick turnip, (*brassica laponica*), and other turnips, (*brassica rapa*). It is therefore to be hoped that the learned director of Berlin, who exclusively devotes the last period of his laborious life to the improvement of botany, will soon remove our doubts on this subject.

"Margraff has formerly asserted that a very pure sugar may be extracted from the fresh root of the different species of the beta cicla, by the same process which is employed in extracting sugar from the cane. The red beet-root, when dried and treated with spirits of wine, yields the twenty-sixth part of its weight of sugar candy, while the white beet-root gives the sixteenth. *Vide* LEWIS's *Experimental History of the Materia Medica*; Aikin's edition, under the article of *beta vulgaris*: and likewise the "*Memoires de l'Academie de Berlin*; 1749."

As the method of preserving pathological subjects, which the skilful Mr. JOHN SHELDON had adopted in his anatomical cabinet, is highly curious and interesting, we do not hesitate to extract the following article from Professor SAINT-FOND's *Travels into England, Scotland*, &c.

"The anatomical cabinet of Sheldon," says our traveller, "contains a great variety of curious preparations. I visited it several mornings, and examined a number of valuable designs made by able artists; but nothing in this collection interested me so much as a kind of mummy, which was very remarkable in two respects: first, on account of the subject itself; secondly, in regard to the manner of the preparation, and the particular care with which it had been made. It occupied a distinguished place in the chamber where this anatomist usually slept; and he was particularly fond of this work.

"I was introduced into a very handsome bed-room; in the midst of which, a mahogany table of an oblong form stood opposite the bed.

"The top of the table opened by a groove, and under a glass frame I saw the body of a young woman, of nineteen or twenty, entirely naked. She had fine brown hair, and lay extended as on a bed.

"The glass was lifted up, and Sheldon made me admire the flexibility of the arms, a kind of elasticity in the bosom, and even in the cheeks, as well

well as the perfect preservation of the other parts of the body. Even the skin partly retained its colour, though exposed to the air.

"The fleshy parts, however, appeared rather dry, and there was too great a rigidity of the muscles. This gave the figure, though it still possessed the remains of beauty, a meagre and feeble air, which considerably diminished the delicacy of its traits.

"Sheldon informed me, that this was partly occasioned by the long sickness of which the young woman died.

"He explained to me the manner in which this preparation had been made: by injecting several parts of the body with strong spirits of wine saturated with camphire, and mixed with a small quantity of turpentine.

"The skin was prepared, and as it were, tanned with finely powdered alum, rubbed on with the hand. The intestines were taken out, and covered with a varnish composed of a mixture of camphire and common resin. All the internal parts of the body underwent the same operation, and were afterwards rubbed with alum.

"Sheldon assured me, that pulverised camphire mixed with resin, formed an excellent composition for preserving muscular and fibrous parts. After having placed all the viscera, thus prepared, in the body, he injected the crural artery with a strong solution of camphire, in rectified spirit.

"Wishing afterwards to imitate the natural tint of the skin of the face, a coloured injection was impelled through the carotides to produce that effect.

"In this state the body was placed in the table aforementioned; but within a double case of timber. The first is made of Virginia cedar *(juniperus Virginiana)*. The inner bottom was covered with calcined chalk, to the thickness of one inch, in order to absorb all humidity. Upon this bed the body was placed; the box or case was then carefully shut up, to secure the body from the impression of the external air.

"The case was not opened till five years after the preparation had been made. It was then observed to be in the same state of preservation as when it was first enclosed. No mark of decay appeared, and no insect had introduced itself near the body. This shrine had been several times opened before I saw the mummy; and though it then still possessed elasticity in several parts, it is to be supposed that the action of the air will ultimately wither it."

It gives us pleasure to mention the rapid progress of beneficent institutions in America, especially in those branches of medical practice which have a more immediate tendency to alleviate human misery, in the lower classes of society.—A lying-in ward has been lately established in the city of New-York. The cases which occur there are numerous enough to answer the purpose of public instruction. A course of lectures on the *obstetric art* is delivered every season, by Dr. VALENTINE SEAMEN, who at the same time explains the anatomical, physiological, and practical parts of midwifery as far as is necessary to enable *females* to exercise that profession with scientific judgment; as this establishment is particularly and *exclusively* devoted to their education.

A handsome impression of the anatomical appearance of the human body, after removing the common integuments, has been executed by Dr. ALEXANDER ANDERSON, of New-York. Part of the abdominal and thoracic viscera are also represented. The engraving is about thirty-six inches by eighteen, and is executed in wood, after the manner of Mr. BEWICK. This promising young artist, who has repeatedly given proofs of his

his taste and skill, has sailed for Europe, to perfect himself in the art of engraving, under the best masters in London and Paris.

Domestic Intelligence.

It having been suggested to us, that a concise Account of the different Hospitals, Infirmaries, and other Medical Institutions in Great Britain, would be acceptable to many of our Readers, and also tend to diffuse the benefits of the Healing Art; in compliance with this suggestion we request our Correspondents to furnish us with such accounts of these Establishments, as may seem likely to answer useful Purposes. We submit the following outline of the Particulars: an Account of the Origin or Foundation of the Institution: a concise History of its Progress to the present Time; a Description of its present State, with respect to Direction, Medical Officers, number of Pupils, Patients, &c. annually admitted.

Dr. Osborn and Dr. Clarke propose to begin their lectures on the principles and practice of midwifery, and the diseases of women and children, on the first Thursday in October, at half past ten o'clock, at the house of Dr. Clarke, in New Burlington-Street, near Piccadilly: these Lectures will be continued there only, and at an hour calculated for the attendance upon the different Hospitals and the other Lectures on the different departments of medicine.

Dr. Pearson will commence his winter courses of lectures on the Materia Medica, Practice of Physic, and Chemistry, in the first week of October next, at the usual hours, at his house in Leicester-square.

Dr. Bradley will recommence his course of lectures on the theory and practice of physic, at the lecture-room, No. 102, Leadenhall-street, on Monday the 7th of October, at six o'clock in the afternoon.

Dr. Robert Kinglake, of Bristol, is preparing for the press a translation of Professor Trommsdorff's useful work, entitled "*ChemischeReceptirkunst für practische Aerzte*, &c. *i. e.* the art of writing chemico-medical prescriptions, for the use of practical physicians:—a work which cannot fail to be interesting to the practitioner in this country, as it contains almost every recent improvement in pharmacy and medical chemistry. We are persuaded that the translator will not fail to avail himself of the valuable works published by Göttling, Hahneman and Buchholz, on that subject, and especially of an anonymous publication which appeared in the year 1792, at Copenhagen, under the title "*Etwas über die Londoner Apothekerbücher*; i. e. Strictures on the different London Pharmacopœias:—we have ventured to suggest these hints, as Dr. Kinglake proposes to enhance the practical value of his Translation, by the addition of occasional notes and illustrations.

Mr. James Parkinson, of Hoxton-square, has a work in the press, which he flatters himself will be acceptable to the lovers of chemistry. It consists of *Chemical Memoranda*, systematically arranged, so as to form an analysis, or rather a compendium of modern chemistry, intended for occasional reference, with a description of the external characters of stones, minerals, &c. from Kirwan; tables of affinities from Bergman, &c. forming together a pocket remembrancer for the chemist and mineralogist.

CRITICAL

CRITICAL RETROSPECT OF MEDICAL AND PHYSICAL LITERATURE.

[FOREIGN AND DOMESTIC.]

*** *Our desire of doing justice to medical works, without exception, and giving at least a concise account of every book in the various branches of Medicine, as soon as it is published, is often frustrated, because we are not acquainted with the time and place of its publication. We shall therefore esteem it a favour, if authors or publishers will communicate to us this information as early as possible: but we cannot, consistently with our plan, take notice of books which have not been published within the last twelve months.*

NATURAL HISTORY.

The Natural History of the Tea-tree, with Observations on the medical qualities of Tea, and on the Effects of Tea-drinking; with coloured Plates. A new edition. By J. C. LETTSOM, *M. D.* 4to. 102 pp. Price 10s. 6d. *London*; Dilly.

The subject of this splendid and elaborate work, being now in general use among the inhabitants of this kingdom, as well as in many other parts of Europe, and constituting a large portion of our commerce, it cannot but afford pleasure to the curious and intelligent, to possess the history of a shrub, with the leaves of which they are so well acquainted.

Dissertationes academicæ Upsaliæ habitæ sub præsidio Caroli Petri Thunberg, Equit. Reg. ord. Wasaei, &c. *Volumen primum.* Cum. Tab. V. aencis. 8vo. 326 pp. 1799. *Gættingen*; Dieterich.

Whoever is acquainted with the name of THUNBERG, and the difficulty of procuring foreign dissertations, will no doubt consider himself indebted to M. PERSOON, whose name we find subjoined to the preface of this volume, as the collector and editor Every friend of medical botany must feel a lively interest in the continuation of this valuable collection, which on account of its variety, and the useful species of information it conveys, cannot fail to meet with universal approbation. But we think it our duty to remind the respectable publisher of this work, not to neglect the promised plates, or even to forget them, as is the case in the volume before us, which contains the following dissertations: *Genera nova plantarum,* p. 1—8, 1781—1798. *De scientia botanica utili atque jucunda,* 1793. *De Flora strengnesensi,* 1791. *De use Menyanthidis trifoliatæ,* 1797. *De oleo Cajeputi,* I. II. 1797. *De Moxæ atque Ignis in Medicina usu,* 1788, *De cortice Angusturæ,* 1793. *De arbore Toxicaria Macassariensi,* 1788. *De Medicina Africanorum,* 1785. *Observationes circa remedia nonnulla indigena.* 1790. *De nautarum valetudine tuenda,* 1795. *Observationes in Pharmacopæam suecicam,* I. 1796.

Herbarium

Herbarium vivum Muscorum frondosorum cum descriptionibus analyticis ad normam Hedwigii, Pars I. Curante ALBERTO HOSE. 8vo. 93 pp. (Price two rix-dollars and nine gresch. Sax. Curr.) 1799. *Leipzig;* Græff.

Our expectations respecting the execution of this work have been rather disappointed. From the plausible title, we expected to find some new and peculiar arrangement and description of the mosses, so that the characters given to them by HEDWIG, might be more obvious and easy to the naturalist than he has hitherto been accustomed to meet with. But here, the mosses are merely pasted to coloured octavo pages, violet, blue, or red; without giving a specific description of their parts of generation; especially of those whose exterior difference and form are discoverable by the naked eye: nor has the author furnished us with a description of the distinguishing parts of such mosses as cannot be easily determined, without knowing their peculiar brim, cover, capsule, &c. All these requisites being neglected, Mr. HOSE has prefixed an index of his genera, a few synonymes, and an account of their native places, together with the time of their fructification. The number before us contains the following twelve species: *Tab.* 1. *Bryum argenteum.* 2. *Dicranum scoparium.* 3. *Fissidens pulvinata.* 4. *Hedwigia pulvinata.* 5. *Hypnum velutinum.* 6. *Hypnum intricatum.* 7. *Hypnum purum.* 8. *Leskea subtilis.* 9. *Polytrichum urnigerum.* 10. *Tetraphis pellucida.* 11. *Tortula muralis.* 12. *Trichostomum canescens.*

Mineralogisches Taschenbuch, &c. i. e. A Mineralogical Pocket-book, for the use of beginners and amateurs. By J. G. LENZ, Doctor of Philosophy and Professor at Jena. Vol. I. pages xxiv. and 300, besides Index and Tables, 1798. Vol. II. pages 246, in Twelves, 1799. *Erfurt;* Hennig.

The author's aim to guide the student and beginner, who have no opportunities of attending public lectures in this difficult branch of science, is indeed praiseworthy; but unfortunately there is something more than good-will required to succeed in any scientific attempt, without possessing either a peculiar talent for description, or genius for discovery. In justice, however, to the industrious author, it must be confessed that he has furnished an useful compend for the tyro; and though he cannot claim much merit of originality in the work itself, as he has chiefly adopted Werner's description of the external characters of fossils, yet his arrangement is sufficiently perspicuous and easy, especially to those pupils in mineralogy who have already acquired some elementary knowledge of this fascinating science.

In the first volume, Dr. Lenz treats of the different species of earths and stones; in the second, of the metals; and in the third he proposes to give an analytical account of the salts and inflammable substances.

Journal für die Botanick, i. e. The Botanical Journal: edited by SCHRADER, Counsellor of Health. Number first. 8vo. 272 pp. with three plates, 1799. *Göttingen;* Dieterich.

When the editor of a new Journal assures us in the introduction, that no attempt, or at least no successful one, has hitherto been made, which could answer the purpose of improving and extending this department of physical knowledge, and that he is enabled to remedy this deficiency, we ought naturally to expect that he will be thoroughly acquainted with the nature of his undertaking, so as to fulfil the promises by which he has committed himself to the public. He in a manner challenges competition, and invokes the severest shafts of the critic.

Our limits do not admit of analytical proof that M. Schrader is not strictly possessed of the qualifications requisite to a good botanical editor; for the very first of the essays entitled, *Lychenum gelantinosorum illustratio*, by Dr. Bernhardi, is not free from error and inaccuracy. Thus, instead of distinguishing particular species of the Lichen with care and attention, the author gives the *Lichen subtilis* a separate place, although it obviously is only the young Lichen *tenuissimus*, Diks. Fasc. I. T. II. Fig. 8.—farther, among the Lich. pulposos, he has confounded five different species; namely, the *Collema glaucescens, crispum, obscurum, cristatum et lobatum*, Hoffm.—as, on the other hand, the Lich. nigrescens he confounds with the *Collema auriculatum*.

The second article is written in German, by Dr. Nohden, on the manner in which plants separate the pollen, or farina, from the parts of fructification;—the third, on the genus *usnea*, together with some remarks on Hoffman's Flora Germanica, by the editor, is likewise a very superficial performance.

The second section of this Journal consists of extracts from foreign botanical works, particularly Vahl's *Eclogæ Americanæ*, fol. 1726; Smith's botanical history of the *Mentha exigua*; Woodward's Remarks on the genus *Ulva*, and the Linnean Transactions, vol. iii. 1797.—The third section contains a review of several botanical publications; the fourth, literary correspondence; and the last, miscellaneous accounts. On the whole, it cannot be denied that this periodical work might prove equally interesting and useful to the friends of botanical science, if it were conducted with more ability and discernment.

PRACTICE OF MEDICINE AND SURGERY.

A Treatise on Bilious Diseases and Indigestion; with the effects of Quassy and Natron in those disorders: By J. Gibson, *M. D.* Surgeon in the Royal Navy, &c. 8vo. 68 pp. 1799. (Two Shillings.) *London*; Murray and Highley.

Every medical practitioner is apprised of the frequency and distressing nature of dyspeptic complaints, whether arising from an idiopathic disease in the stomach itself, from a derangement in the biliary or pancreatic secretions, or in a secondary way from more general diseases of the system, such as gout, pregnancy, fever, &c.

The success in the cure will always depend upon assigning the true seat and cause of the evil, and then applying the most efficacious remedies.

Our author's treatise is confined to the latter class of means. His favourite remedy is—

Ry. Ligni quassiæ incis. sesquidrach.
Natron drach. ij. cum semisse
Aquæ fervent. lb. ij.—Infunde per horam & cola.
Dosis cochl. iv. mag. ter quarterve de die.

He occasionally increases the sal sodæ, and sometimes gives calomel, salts, soap, and aloes, camphor and ipecacuanha, steel and myrrh, and warm water.

He does not, however, exclusively confine himself to dyspepsia, but introduces jaundice, dry belly-ach, ague, cholera morbus, &c. as depending on the bile.

Observations deduced from Facts and Experiments, tending to evince the non-existence of Typhus contagion: interspersed with remarks on animal life, and on

on those laws by which it is governed; also with some remarks on the nature of those diseases, which are epidemic at sea. By J. FRANK, Surgeon in his Majesty's navy, &c. 8vo. 70 pp. 1779. *London;* Johnson.

At a time when the nature of febrile contagion, and the most effectual means of preventing its ravages, engage so much attention through the whole continent of America, and among the physicians of the British navy and army in Europe, our readers will doubtless be surprised to find a pupil of Blane, Robertson, and Trotter in England, and an eminent physician at Calcutta*, attempting to prove, from their own observation and experience, that *such contagion* has no existence.

Dr. MITCHILL, and his numerous adherents in America, appear to support their opinion, by referring the cause of their endemics to a particular state of the atmosphere. Even Dr. ROBERTSON, who imputes all idiopathic fever to contagion, says, page 88: "Whatever has a tendency to debilitate the system, may either be a remote or a proximate cause of fever, according to the constitution of the patients," &c. See our Number V. p. 474.

It is not our province to give decisive opinions; but, by suggesting arguments, facts, and experiments, to enable the reader to form just ideas for himself: we have, however, no hesitation in admitting the importance of the subject.

Practical Observations on the Cure of Wounds and Ulcers on the Legs, with and without rest; illustrated with Cases: By THOMAS WHATELY, &c.

[Concluded from our last Number, pp. 88—91.]

With respect to the *manner* of applying the roller, Mr. Whately is anxious to give the most pointed and unequivocal directions; and as we have already quoted some of the particulars relative to this subject, we think it our duty to extract the succeeding part of the "Postscript," in the words of the ingenious author; and thus enable the reader to form a just opinion on a subject of great importance in chirurgical practice.

"In applying a roller, the first circle should be made *round* the *lowest* part of the ancles as near as possible to the heel; the second should be formed from thence round the foot; the third should be passed again round the foot quite to the toes. The roller should then be passed from the foot round the ancles and instep a second time, to make the fourth circle. In doing this it should be brought nearer (but not over) the point of the heel than it was at the *first time* of going round this part. The fifth circle should pass over the ancles again, and not more than half an inch higher up the leg than the fourth circle. The sixth, seventh, eighth and ninth circles should ascend spirally along the small of the leg, at the *exact distance* of three fourths of an inch from each other. Having proceeded thus far up the leg, we may begin to increase the distances of the circles from each other; they may succeed each other upward to the knee, at the distance of from one to two inches, according to the size and shape of the leg. At that part where the calf of the leg commences, it is generally necessary to let the upper edge of the roller be once, twice, or thrice, turned downwards for about half the circumference of the leg, in order to make the roller lay smooth between the middle of the calf, and the small of the leg. When the roller has been thus applied as far as the knee, there will be a portion of it to spare of perhaps a yard in length; this remainder should be brought down by spiral windings, at greater distances

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* Dr. Maclean.

tances from each other than thoſe which were made on the aſcent of the roller. The windings ſhould in general be completed in the ſmall of the leg, where the roller ſhould be pinned.

" In *many* caſes it is neceſſary to apply the roller *over the heel.* Where this is done, the firſt circle ſhould be made as low as poſſible round the ancles; as in the former deſcription. From thence, the ſecond circle of the roller ſhould paſs from the inſtep over one ſide of the heel, and be brought over the other ſide of the heel to the inſtep again. The third circle ſhould be paſſed round the ancles a ſecond time, but ſtill nearer to the heel than the firſt circle was. The roller ſhould after this be brought back to the foot, and paſſed round it to make the fourth circle. A fifth circle ſhould be again made (though it is not in all caſes abſolutely neceſſary) round the foot, to the toes. To make the ſixth circle, the roller ſhould be brought back, and paſſed round the ancles again. The ſeventh, eighth, ninth, tenth, and eleventh circles ſhould aſcend ſpirally at the *exact diſtance* of three fourths of an inch from each other; theſe diſtances commencing at the ſixth circle. The roller ſhould then be carried to the knee, and be brought down again to the ſmall of the leg, as deſcribed in the former inſtruction.

" In applying the compreſſes, it is neceſſary in every inſtance to put them on one by one, and not all in a maſs, though they be of a proper ſize and number. They ſhould be croſſed in different directions; the largeſt of them ſhould in no caſe be longer than juſt to meet on the oppoſite ſide of the leg to which they are applied. I have in many inſtances ſeen the compreſſes applied by patients of ſuch a length as to go round the leg like a roller, and be faſtened together with pins. This method generally wrinkles and bliſters the ſkin, and by no means anſwers the purpoſe of making a compreſſion on the part where it is moſt wanted. I never ſuffer a pin to be uſed in the compreſſes. If the ſame compreſſes in any caſe be applied two days together they ſhould be always turned on the contrary ſide at each re-application, in order to prevent wrinkles on the ſkin.

" I muſt now reply to two objections made by Mr. Baynton, in the 39th page of the ſecond edition of his work. The firſt is, that it is difficult to retain the roller on the parts to which it is applied; the ſecond is, that it gives pain to the patient. In anſwer to the firſt of theſe objections, my experience warrants me to ſay that a flannel roller will in almoſt every inſtance keep the exact poſition it was firſt placed in for much longer time than is neceſſary. I have ſeen theſe rollers many hundred times keep their ſituations without any variation whatever for two days; and that too without the leaſt reſtraint upon exerciſe. This has happened in thoſe caſes, where from the diſtance of the patient, or from the circumſtance of his being nearly cured, I have wiſhed to dreſs the leg only every forty-eight hours. I muſt go a ſtep further, and obſerve, that I have ſeen repeated inſtances in which theſe rollers have remained in their ſituation for three or four days, and even nearly for a week without being applied afreſh. In ſhort, it is one of the beſt properties of a flannel roller, that it is eaſily retained in its ſituation, when well applied. In *every* inſtance in which it is neceſſary to uſe one, I could pledge myſelf to apply it in ſuch a manner, as ſhould prevent its altering its poſition for two days. The method I ſhould uſe I have already deſcribed; in addition to which nothing more would be neceſſary, even in thoſe caſes where the ſhape of the leg is peculiarly unfavourable to the retention of a bandage, than the inſertion of a few pins.

" In anſwer to the ſecond objection, I obſerve, that I have invariably found, that when a flannel roller has been applied in the manner here deſcribed, and has not been drawn unneceſſarily tight, it gives no pain. It fits nearly

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as easy as a common stocking, and allows a very free motion and exercise of the limb. It has been stated in this work, that the application of the compresses makes the necessary degree of pressure on the ulcer, and thereby prevents the necessity of drawing the roller so tight over the other parts of the leg, as would have been necessary were the compresses not used.

"There is another circumstance which Mr. Baynton considers as giving his method a great advantage over the roller, which is, that by means of the plaster, the edges of the sore may be made to approximate in such a manner that the cicatrix, or new-formed skin, will be less after a cure performed by this method, than by any other. In almost all these cases, before the cure is attempted the leg is more or less enlarged by swelling; and as this swelling is entirely removed by compression, it readily allows the skin to approximate on the healing of an ulcer. Added to this, there is a process of Nature always going on in healing an ulcer or wound in any part of the body (whether there be a loss of substance or not), by which a cicatrix is always considerably less than the previous size of the sore. This effect occurs in all cases, whether the patient be cured by the horizontal position, a roller, or by strips of adhesive plaster. The size of this cicatrix will likewise vary in different cases where the ulcers have been of the same size, by whichever of these three methods they be cured. It will be larger in those ulcers which are accompanied with strong adhesions of the adjoining parts, than in those where such adhesions have not been produced; and this effect will take place to the greatest degree where the ulcers are situated over the tibia, and by long continuance have produced immoveable adhesions of the cellular substance to the adjoining periosteum. The adhesive plaster, when applied as a bandage, will without doubt, leave as small a cicatrix as any other method of cure; but for the reasons already assigned, I do not believe, that the cicatrx will in any case be *smaller* than that produced by a roller. In every case cured by the latter method, I have found the cicatrix very small, when compared with the previous size of the ulcer."

Descriptive Account of a New Method of treating old Ulcers of the Legs: By THOMAS BAYNTON, &c.

[Concluded from our last Number, pp. 92 and 93.]

In furnishing the reader with an account of the method adopted by Mr. Baynton, in the treatment of old ulcers of the legs, we were, for want of room in our last Journal, reluctantly obliged to discontinue the quotations from the author's treatise, immediately before we mentioned his explanation of the *modus operandi*, and the respectable testimonies he has adduced in favour of his practice.—At present, therefore, we resume the subject, from that part of his work where he has described the mode of applying the bandage, and managing the dressings.

"If the parts be much inflamed," continues Mr. Baynton, "or the discharges very profuse, they should be well moistened and kept cool with cold spring water, poured upon them as often as the heat may indicate to be necessary, or perhaps at least once every hour. The patient may take what exercise he pleases, and it will be always found, that an alleviation of his pain, and the promotion of his cure, will follow as its consequence, though, under other modes of treating the disease, it aggravates the pain, and prevents the cure.

"These means, when it can be made convenient, should be applied soon after rising in the morning, as the legs of persons affected with this disease are then found most free from tumefaction, and the advantages will be

greater

greater than when they are applied to limbs in a swollen state. But at whatever time the applications be made, or in whatever condition the parts be found, I believe it will always happen, that cures may be obtained by these means alone, except in one species of the disease, which seldom occurs, but that will be hereafter described. The first application will sometimes occasion pain, which, however, subsides in a short time, and is felt less sensibly at every succeeding dressing. The force with which the ends are drawn over the limb, must then be gradually increased, and when the parts are restored to their natural state of ease and sensibility, which will soon happen, as much may be applied as the callico will bear, or the surgeon can exert; especially if the limb be in that enlarged and incompressible state, which has been denominated the scorbutic, or if the edges of the wound be widely separated from each other.

"It was observed in the preceding part of this Treatise, that I feared the consequence of breaking the skin in the vicinity of the sores; later experience has proved such occurrences to be of no consequence on any part except the tendon Achilles, those wounds being always healed again in a few days; whereas on the tendon, such accidents occasion more trouble, and require sometimes the care of many weeks. I therefore now make it a practice, wherever the case requires considerable extension of the skin upon that part of the limb, especially if the patient be of a spare habit, to defend the tendon with a small shred of soft leather, previously to the application of the adhesive slips.

"It may be necessary to add, that cures will be generally obtained without difficulty, by the mere application of the slips and bandage, but when the parts are much inflamed, the secretions great, or the season hot, the frequent application of cold water will be found a valuable auxiliary, and may be always safely had recourse to, where the heat of the parts is greater than is natural, and the body free from perspiration."

After having illustrated and exemplified the superior advantages of his practice by eighteen cases, the last of which deserves particular notice, as the swelling, pain, and inflammation of the leg arose from weakness of the absorbents, occasioned by a fracture of one of the bones of the leg, the author concludes his account with the following judicious remarks:

"In many other instances of weakness and lameness, which succeeded to fractures of the bones and strains of the joints, the adhesive plasters prepared and applied, so as to form bandages, have proved very useful, through the support they afforded; and I believe it will be generally found, that the confinement required in such cases may be considerably diminished, and frequently rendered unnecessary, by their application. This should, perhaps, be expected from what has been suggested concerning the theory of their effects; but if it be conjectured, that the same advantages may be obtained by common bandages, my personal experience, as well as the reports of my patients, unfortunately enable me to assert the contrary, as a contusion and strain of one of my knees, and a similar injury of my left ancle, the former received in the month of May last, and the latter about ten days since, by the falling of horses, prove that it is possible to walk without much inconvenience, when the parts are so supported, at a time that it is scarcely possible to stand, if they receive only the support of a common roller.

"These facts so strengthen some of the opinions delivered concerning the *manner* whereby the cure of many ulcers is accomplished, that it would be improper to omit their insertion. The practical interference will not, I believe, be found less deserving of attention, as it informs us that plasters denominated

denominated strengthening, prove so in consequence of their affording a *peculiar kind* of support to the systems of vessels, rather than through the qualities of their ingredients; and that they become much more effectual when applied so as to encompass and support the whole, or part of a diseased limb, than when *merely placed* upon it, with the expectation of advantages from the properties of their component parts."

An entire new Treatise on Leeches; wherein the nature, properties, and uses of that animal are clearly explained. By G. HORN, Apothecary, &c. 8vo. 30 pp. 1s. 6d. *London;* Symonds.

The importance of this valuable *instrumentum medicinæ* will doubtless induce the public to inquire into its uses, and the best means of its propagation and preservation, for the purposes of medicine and surgery; on all which subjects our author appears to have taken considerable pains to convey information.

NEW MEDICAL PUBLICATIONS IN AUGUST.

Lectures on Diet and Regimen: being a Systematic Inquiry into the most rational means of preserving Health, and prolonging Life; together with physiological and chemical explanations, calculated chiefly for the use of families, in order to banish the prevailing abuses and prejudices in Medicine. *The second edition, improved and enlarged, with considerable additions.* By A. F. M. WILLICH, M. D. 8vo. 708 pages. Price 9s. in boards, or 10s. 6d. on wove paper. *Longman* and *Rees.*

The Natural History of the Tea-tree; with observations on the medical qualities of Tea, and on the effects of Tea-drinking; with coloured Plates. *A new edition:* By J. C. LETTSOM, M. D. 4to. 102 pages. 10s. 6d. *Dilly.*

Observations deduced from Facts and Experiments, tending to evince the non-existence of Typhus-contagion, interspersed with remarks on Animal Life, and on those laws by which it is governed; also with some remarks on the nature of those diseases which are epidemic at sea. By J. FRANKS, Surgeon in his Majesty's navy, &c. 8vo. 70 pp. *Johnson.*

A Treatise on Bilious Diseases and Indigestion; with the effects of Quassy and Natron in those disorders: By J. GIBSON, M. D. Surgeon in the Royal Navy, &c. 8vo. 68 pp. 2s. *Murray* and *Highley.*

An entire new Treatise on Leeches, wherein the nature, properties, and uses of that singular and valuable animal are clearly explained. By J. HORN, Apothecary, &c. 8vo. 30 pp. 1s. 6d. *Symonds.*

Observations on the diseased and contracted urinary bladder, and frequent painful micturition, with some cautions respecting the use of the caustic bougie in the treatment of strictures in the urethra: including a paper on the scirrho-contracted rectum, to which the Medical Society of London adjudged a prize medal in the year 1798. By JOHN SHERWEN, M. D. Member of the Corporations of Surgeons. Price 1s. 6d. *Johnson,* and *Murray* and *Highly.*

NEW MEDICAL PUBLICATIONS IN GERMANY.

Sammlung auserlesener Abbandlungen, &c.—A Collection of Treatises, selected for the use of Medical Practitioners. 8vo. Vol. XVIII. *Leipzig.* Dyk.

Kurze Darstellung, &c.—A concise view of the chemical inquiries into the nature of the different gases. By Dr. A. N. SCHERER. 8vo. *Weimar.* Gædicke.

Versuch einer Theorie der elektrischen Erscheinungen.—An Essay towards a theory of the phenomena occurring in Electricity: By L. A. VON ARNIM. 8vo. 146 pp. with a Plate. *Halle.* Gebauer.

Der

Der Arzt für Freudenmædchen, &c.—The Medical Guide for the Votaries of Pleasure, &c. 8vo. 138 pp. Bremen.

Ueber das Ausziehen fremder Kærper, &c. On the extraction of foreign bodies from the œsophagus and the trachea: By T. G. ECOLDT. 4to. with five plates. *Leipzig*; Tauchnitz.

Analytische Tabellen, &c.—Analytical Tables, exhibiting the different species of Minerals; being an Attempt towards a more correct Method of determining and recognizing them, without a Teacher. By A. J. G. B. BATSCH, Prof. at Jena: with a Plate (28 grosch. or about 3s. 6d.) *Jena*; Gœpferdt.

Handbuch der praktischen Heilmittellehre, &c.—A Manual of practical Therapeutics, for the use of the young Practitioner, as well as the Friend of the Veterinary Art. Vol. I. containing the Therapeutics of external diseases. 8vo. (12 grosch. or about 2s.) *Leipzig*; Seeger.

Apothekerlexicon:—A Pharmaceutical Dictionary. By SAM. HAHNEMANN. 8vo. two vols. *Leipzig*; Crusius.

G. F. HOFFMANNI, *Plantæ lichenosæ delineatæ et descriptæ*. Vol. VIII. *Fasc. 3tius cum figuris coloratis. Folio.* (3 rix-doll. 12 grosch.) or about 13s. 6d.) *Ibid.*

NEW MEDICAL PUBLICATIONS IN FRANCE.

Experiences sur le Galvanisme, &c.—Experiments on Galvanism, and likewise on the irritation of the muscular and nervous fibres: By F. A. HUMBOLDT, translated from the German; with Additions, by J. F. A. JADELOT. 8vo. 600. pp. (Price 6 livres) *Paris*; Fuchs.

Observations sur l'Operation dite Césarienne, &c.—Observations on a successful instance of the Cæsarean operation: to which is added a Description of a new method of performing it. By Cit. J. A. MILLOT, Accoucheur. 8vo. 38. pp. *Paris*; Croullebois.

TO CORRESPONDENTS.

We have already apprized our Correspondents, that we cannot, consistently with our plan, admit anonymous strictures on any communications which have been published in this Journal, with the signatures of their authors. We are confident that many of our respectable friends have been induced to honour us with their contributions, in consequence of the conviction, that they were perfectly secure from the shafts of illiberal or anonymous criticism.

The letter dated August the 12th, and signed "Observator," contains such assertions relative to the Inoculation of the Cow-pox, as cannot be published without either proof or authority. If the 'Observator' can procure the former, and authenticate it with the signature of his *real* name, we shall not hesitate a moment to comply with his wishes.

Another paper signed J. B. August 17th, must be delayed for similar reasons.

The letter with the signature D. W. on the Prevention and Cure of Dysentery, arrived too late for insertion in the present Number.

The interesting Account of an extra-uterine Fœtus, transmitted to us by a Medical Friend at Norwich, shall certainly appear in our next.

Mr. L——'s paper on the Aqua Ammoniæ Acetata must be likewise postponed for want of room.